

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

2SD11
R23

CAT 131



United States
Department of
Agriculture

Forest Service

Tongass
National
Forest
R10-MB-261

September 1994



Ushk Bay Timber Sale(s)

Final Environmental Impact Statement

Record of Decision

200
100
50
25
10
5
2
1
0



**United States
Department of
Agriculture**



National Agricultural Library



United States
Department
of Agriculture

Forest
Service

Region 10
Tongass National Forest

Chatham Area
204 Siginaka Way
Sitka, Alaska 99835
(907-747-6671)

Reply To: 1950

Date: August 5, 1994

Dear Reader:

Attached is the Record of Decision (ROD) for the Ushk Bay timber sales. If you requested complete documentation of this decision, the following items should be found in the package:

Record of Decision
Summary
Volume I: Final Environmental Impact Statement (EIS)
Volume II: Appendices A - O

If you requested the quick review documentation of this decision, the package should include only the ROD and Summary. Copies of the entire Final EIS are available for review at Forest Service offices in Juneau, Hoonah, Sitka, Petersburg, Wrangell, and Ketchikan. Copies have also been sent to libraries throughout Southeast Alaska.

The ROD documents my final decision on the selection of an alternative, and the factors considered in reaching the decision. The Effective Date of Implementation for the decision and the Notice of Rights of Appeal are also specified in the ROD.

I want to thank those of you who took the time to review and comment on the Draft Environmental Impact Statement and also those who participated in the Subsistence Hearings. Your interest in the management of the Tongass National Forest is appreciated. I also want to extend a special thank you to those who requested the quick review documentation of this decision in lieu of the entire set of the Final EIS.

Sincerely,

GARY A. MORRISON
Forest Supervisor

Enclosures

940802 1115 IDT1 1950 MW



Ushk Bay Timber Sale(s)

Final Environmental Impact Statement

Record of Decision

U.S.D.A. Forest Service, Alaska Region
Tongass National Forest, Chatham Area
Sitka Ranger District

Lead Agency	U.S. D. A. Forest Service Tongass National Forest, Chatham Area 204 Siginaka Way Sitka, Alaska 99835
-------------	---

Responsible Official	Gary A. Morrison, Forest Supervisor Tongass National Forest, Chatham Area
-------------------------	--

For Further Information, Contact	Michael J. Weber, Team Leader U.S.D.A. Forest Service Tongass National Forest, Chatham Area 204 Siginaka Way Sitka, Alaska 99835 (907) 747-6671
--	--

Contents

Ushk Bay Record of Decision	1
Background	1
Decision	1
Reasons for Decision	3
Public Involvement	8
Coordination with Other Agencies	8
Alternatives	8
Mitigation	10
Monitoring and Enforcement	11
Findings Required by Law	12
Implementation of This Decision	16
Right to Appeal	18
 Appendix 1 Poison Cove Selected Alternative Volumes; Ushk Bay Selected Alternative Volumes; Post-harvest Silvicultural Treatments; Enhancement Opportunities	
 Appendix 2 Road and Unit Cards Not Included in the Final EIS	
 Appendix 3 Road Management Objectives (RMOs) for the Selected Alternative	
 Appendix 4 Proportion of Volume Classes 6 and 7 Planned for Harvest for the Selected Alternative	
 Appendix 5 Monitoring	

Ushk Bay Record of Decision

Background

The purpose and need for the Ushk Bay project is to make timber available, under the direction contained in the Tongass Land Management Plan and its amendments, to help meet market demand and to establish managed stands capable of long-term timber production.

Analysis of the demand for timber volume through 1995, under terms of the revised long-term contract with Alaska Pulp Corporation (APC), indicated that between 55 and 100 million board feet of volume would need to be made available from the Ushk Bay Project Area in 1994. However, the April 14, 1994, contract termination decision ended APC contract volume obligations. In May, 1994, an independent sale program market assessment (Morse 1994) was completed. The assessment indicates that the Ushk Bay volume is still needed to contribute to the projected independent sale program (Final EIS, Appendix O, Enclosure 1). The Ushk Bay Project was one of a series of timber harvest projects that were being considered within the APC contract boundary. These projects will now contribute to the independent sale program and the Ketchikan Pulp Company contract (Final EIS, Appendix O, Enclosure 2). See Final EIS Appendix A for a discussion of how Ushk Bay was selected.

An evaluation was done on whether the change from a long-term timber sale contract offering to independent timber sales, and other information that has become available since the Draft EIS, constituted significant new circumstance or information relevant to environmental concerns to warrant preparing a supplement to the Draft EIS. The determination was that a supplement to the Draft EIS was not needed before releasing the Final EIS and Record of Decision (ROD). The evaluation is included in Appendix O of the Final EIS.

Public scoping, data gathering and analysis, and document production began with publication of the Notice of Intent in the *Federal Register* May 8, 1992. The Notice of Availability for the Draft EIS was published in the *Federal Register* June 11, 1993, and the public comment period for the Draft EIS closed August 25, 1993. This ROD and Final EIS disclose the environmental effects of the alternatives considered and document the decision for authorization of activities within the Project Area.

Decision

This Record of Decision documents my decision to select the timber harvest areas to be made available from the Ushk Bay Project Area. My decision includes the following:

- The volume to make available in this area through independent timber sales;
- The location of independent sales;
- The location of timber harvest units;
- The location of road systems;
- The location of log transfer facilities;



Record of Decision

- Mitigation measures and enhancement opportunities for resources other than timber; and
- Whether there may be a significant restriction on subsistence uses.

It is my decision to select Alternative F with modifications, as shown on the Selected Alternative map (Figure R-1), for implementation in the Ushk Bay Project Area. This decision is most responsive to the issues raised during scoping, data gathering and analysis, public responses to the Draft EIS, and testimony received at the subsistence hearings.

Specifically, my decision authorizes the following:

1. Approximately 2,166 acres of commercial forest land will be harvested. Implementation is expected to occur in two independent timber sales. This specified harvest will provide approximately 54 million board feet of sawlog volume and 13 million board feet of utility volume for a total of 67 million board feet. There will be 60 timber harvest units. Table 1 lists the expected independent sales and the sale locations are shown on Figure R-2. ROD Appendix 1 lists each unit, by timber sale, approved for harvest under the Selected Alternative. Design features of the timber harvest units are described in detail on the unit cards in Final EIS Appendix C and ROD Appendix 2.

Table 1

Independent Timber Sales

Timber Sale	Volume (MBF)	Sale Date	Duration	Est. Net Stumpage Value
Poison Cove	27,409	1995	2-3 yrs.	\$12.40
Ushk Bay	39,795	1996	3-4 yrs.	\$2.94

Source: Regan, 1994

2. I modify Alternative F by removing the following harvest units and roads from the Alternative:
 - VCU 279: Unit 33
 - VCU 280: Units 19, 20, 21, 21A, 22, 22A, 23, 138, 138A; Roads 7518, 75188, 75189
 - VCU 281: Units 37A, 67, 68, 78B, 78C, 78D, 78E, 5A, 81, 79B; Portions of roads 75186, 7516N
3. I also add the following units and roads from Alternative C as it is displayed in the Final EIS:
 - VCU 279: Units 110, 116, 117, 118, 119, 50, Groups I and II; a portion of Road 7518
 - VCU 280: Units 118, 119
 - VCU 281: Units 39, 14, Groups II and III; a portion of road 7518
4. I also add the following units from Alternative E as it is displayed in the Final EIS:
 - VCU 279: Unit 105
 - VCU 281: Units 2, 93

5. I also substitute the following units from Alternative E, as displayed in the Final EIS, for the same units in Alternative F that have a different configuration:
 - VCU 280: 36
 - VCU 281: 3, 16A, 37, 86A, 72
6. The Selected Alternative includes construction of 27.0 miles of new system road, and construction of 15.4 miles of temporary road in order to access the specified timber harvest units. Appendix C of the Final EIS contains the Road Cards with specific direction for the location of each road. ROD Appendix 3 lists the roads and their respective road management objectives for future management of the transportation system.
7. A temporary drive-down log transfer facility (LTF) for nonviolent entry operations, as defined by the Alaska Timber Task Force (less than three feet per second), will be constructed on the south side of Poison Cove. This will be constructed at a -12 percent grade which will require approximately 2,500 cubic yards of clean shot rock fill. This will be used to transfer logs to the water for timber harvest in VCUs 281, 280, and 279. Associated with the Poison Cove log transfer facility will be an upland camp for the logging families, and other support activities needed to make the camp workable (boat dock, fuel storage, sort yard, rafting areas, etc). Another temporary drive-down LTF for nonviolent entry operations will be constructed at a new location at Goal Creek as shown on Alternative C. This will be constructed at a -15% grade which will require approximately 1,500 cubic yards of clean shot rock fill. This will be used to transfer logs to the water for timber harvest in VCUs 279 and 280.
8. A log sorting area will be constructed close to the Poison Cove LTF site. No sorting area will be utilized at the Goal Creek LTF site due to the relatively small amount of timber being transferred.
9. This Record of Decision identifies required mitigation measures to reduce or eliminate adverse environmental effects of the timber harvest and road construction activities specified in the Selected Alternative. Appendix I of the Final EIS and ROD Appendix 5 presents the implementation and effectiveness monitoring that will be conducted to determine how well the resource management objectives have been met.
10. In addition, the description of the Selected Alternative shows enhancement opportunities that are feasible following implementation of this alternative. These opportunities will be included in Sale Area Improvement plan(s) developed in conjunction with each sale.
11. Finally, I have determined that there is a significant possibility of a significant restriction on subsistence use of deer in the Project Area and that this action will in part contribute to that possibility, but that: (a) these actions are necessary, consistent with sound management of public lands; (b) the amount of public land involved to implement the Selected Alternative is (considering sound multiple-use management of public lands) the minimum necessary; and, (c) reasonable measures to minimize impacts on subsistence have been adopted to the maximum extent practicable while still meeting the purpose and need for this project.



Reasons for Decision

In making my decision, I worked to ensure consideration of all issues, taking into account the competing interests and values of the public who participated in this project. I believe the decision is reasonable. The Selected Alternative continues to provide a beneficial mix of resources and uses to the public within the framework of the existing laws, regulations, poli-

Record of Decision

cies, public needs and desires, and capabilities of the land, while meeting the stated purpose and need for this project.

My decision to implement this Selected Alternative is consistent with the Tongass Land Management Plan (TLMP) as amended, and sound National Forest management. I have considered the need to help maintain an adequate timber supply in support of community stability. I have also considered the need to provide strong protection measures for fish, wildlife, and other resources important to subsistence, recreation, commercial, and other uses.

The units and roads in the Deep Bay drainage are deleted from the Selected Alternative because of the unresolved Native allotment claim at the head of Deep Bay.

Units 5A, 33, 37A, 78B, 78C, 78D, 78E, 79B, and 81 are deleted and the boundaries of Units 4, 5, 8, 11, 12, 27, 28, 29, 30, 30A, 31, 35, 72, 37, 74A, 75, 77, 79, 79A, 82, 86, 90, 101, and 105 are adjusted, as reflected on the unit cards in ROD Appendix 2, because of fisheries, watershed, visuals, or windfirmness concerns. Units 40 and 93 are in the Alternative F and E configurations respectively, but they will be helicopter yarded. Unit 39 (Alternative C configuration) has been broken into two units, with Unit 39 in the Ushk Bay Sale and Unit 39A in the Poison Cove Sale. Both will be helicopter yarded. Units 4A and 30B are a result of a middle portion of the original units 4 and 30 being dropped for fisheries and watershed concerns.

Units 14, 39, 50, 110, 116, 117, 118, 119, Group I, Group II, and Group III from Alternative C and units 2, 3, 36, 37, 72, 86A, 93, and 105 from Alternative E are included in the Selected Alternative in order to offset the timber volume lost by deletions of units or portions of units in Alternative F, in order to meet the purpose and need for this project.

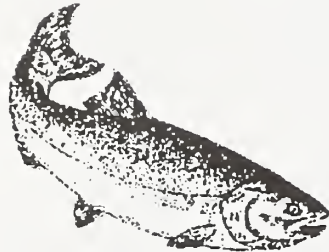
Uneven-aged silviculture or selective harvest is a relatively new silvicultural system in Southeast Alaska. The Ecosystem Management Strategy for Forest Service Programs in Alaska, item I.C.(5), signed in October 1992, requires that the Forest Service test the applicability of silvicultural methods other than clearcutting on selected timber projects. The areas for which uneven-aged silviculture is prescribed (Groups I, II, and III) were identified and designed to ensure the success of the prescription. This includes removing a portion of the trees in small patches, two acres or less in size, within the Groups, while successfully retaining natural regeneration and the other trees around the small patches. The specific logging plan for each area of selective harvest is described on the Unit Cards and an Integrated Silvicultural Prescription will be prepared prior to implementation. Sale administrators will ensure that the logging operations accomplish the harvest objectives for these units. Implementation of these prescriptions is intended to add to our knowledge of alternate treatments for Southeast Alaska timber types.

At this time, the Pacific Northwest Research Station Forest Sciences Lab is initiating a formal study to evaluate alternatives to clearcutting. This study is in the early stages of planning. It is possible that some of the units in the Selected Alternative for Ushk Bay will be included in the study.

How Issues Are Addressed

In the following summary, I detail how the Selected Alternative addresses each of the significant issues. The list of issues is revised from the DEIS because Issue 2, Timber Resources, in the DEIS is basic to the Purpose and Need and does not affect the alternatives. It was determined not to fit the definition of a significant issue (see Chapter 1 of the FEIS). Refer to Table 3 of this Record of Decision to supplement the following discussion and provide a comparison of the FEIS alternatives and the Selected Alternative.

Issue 1: Will the proposed timber harvest and road construction activities adversely affect subsistence uses?



This issue reflects public concern for the availability of wildlife, marine life, and plants for customary and traditional use by rural Alaska residents.

The Alaska National Interest Lands Conservation Act (ANILCA) requires the Forest Service to determine if proposed activities may significantly restrict use of subsistence resources. If such a finding is made, then ANILCA requires public hearings and determinations regarding actions to minimize impacts prior to proceeding with a project.

Chapter 4 of the Final EIS contains the ANILCA 810 subsistence analysis. In summary, the analysis concludes that there is a significant possibility of a significant restriction of subsistence use of Sitka black-tail deer in the Project Area for the communities of Haines, Petersburg, Sitka, and Wrangell. This is a possibility regardless of which alternative is implemented, including the No-Action Alternative. Among these four communities, there is sufficient habitat capability in Wildlife Analysis Areas (WAAs) hunted by community residents to meet subsistence needs of all communities in the foreseeable future except for Sitka. The analysis also concludes that there is a significant possibility of a significant restriction on fish and shellfish based on changes in access during the period of active timber harvest for alternatives that include an LTF or logging camp in Ushk Bay. The Selected Alternative excludes LTFs and logging camps from Ushk Bay. The foreseeable effects of the action alternatives do not represent a significant possibility of a significant restriction for other resources used for subsistence.

Access to historic subsistence-use areas may be affected where logging activities (LTFs, logging camps) are located in the beach fringe. This is because traditional subsistence access is by boat to the beaches of the Project Area. Motor vehicle access is provided only by barge or boat since the Alaska Marine Highway ferries do not stop within the Project Area. Because of this limited access, only a minor increase in access to the area is expected. Roads will be located away from the beaches and Road Management Objectives for the Selected Alternative discourage vehicular access.

Any displacement of subsistence users that may occur is likely to be to other areas within a household's or community's historical range. None of the four potentially restricted communities averaged more than 7 percent of its subsistence harvest of deer from the Project Area during 1987 to 1991. The community of Sitka averaged 7 percent and the other three communities averaged one percent or less. Furthermore, any displacement that may occur would likely be temporary until activities within the Project Area conclude in 3 to 5 years.

The Selected Alternative reflects efforts of the Forest Service to minimize effects on subsistence resources used by those rural communities that would be most likely to receive the highest priority for game in the event of an ANILCA Section 804, Tier II restriction. The Selected Alternative eliminates timber harvest in the Deep Bay watershed which avoids potential subsistence conflicts with an LTF in Deep Bay and reduced habitat capability for subsistence species. No logging camp or LTF will be developed in Ushk Bay to avoid, to the extent practicable, conflicts with subsistence access, competition and resource abundance in this portion of the Project Area. Road Management Objectives, as mentioned above, will discourage vehicular access, which will reduce the potential for increased competition from all terrain vehicle (ATV) users.

Issue 2: How will the timber harvest and road construction activities affect recreation and visual resources?

This issue addresses concerns for outdoor recreation and scenic viewing opportunities offered in and around the Ushk Bay Project Area and the effects timber harvest and transportation system development may have upon these opportunities.

Record of Decision

The Selected Alternative will result in an overall decrease in acres of Primitive and Semiprimitive Non-motorized opportunities of 32 percent, for the Ushk Bay Project Area as a whole. However, the Project Area contains only a small amount of the total recreation opportunities on the Tongass National Forest, and there are similar recreation opportunities nearby. The Upper Hoonah Sound LUD II area, the West Chichagof-Yakobi Wilderness, and the proposed Big Bear/Baby Bear Bays State Marine Park are immediately adjacent to the Project Area. In addition, the favorite anchorages in Ushk and Deep Bays, and overall scenic quality in Deep Bay, will not be affected by the Selected Alternative. None of the constructed road system will be maintained open following project completion.

Timber harvest activities would take place in three Value Comparison Units (VCUs). Ushk Bay, Poison Cove, and Deep Bay VCUs would be scheduled for some level of harvest with the Selected Alternative. The level of timber harvest and road construction will result in either a Modification or Maximum Modification Visual Quality Objective along Peril Strait from Ushk Bay to Goal Creek. No timber harvest activities will be visible in the Project Area along Peril Strait south of Goal Creek or from within Deep Bay. Selective harvest is prescribed for units in visually sensitive areas along Peril Strait to mitigate visual impacts. The LTFs planned for development in Poison Cove and at Goal Creek would have a strong visual impact when viewed from the foreground, and little, if any, visual effect from background views (Final EIS, Chapter 4). No LTF or logging camp facility will be located in Ushk Bay. Roads and harvest activity will be located away from the Ushk Bay beach to minimize impacts.



Issue 3: What effects will timber harvest and road construction activities have on the Native allotment land claim at Deep Bay?

This issue addresses concerns about impacts to an area at the head of Deep Bay that is an unresolved Native allotment land claim.

The Selected Alternative eliminates timber harvest and road construction in the Deep Bay drainage, which avoids any impacts to the Native allotment land claim.

Issue 4: What would be the economic and social effects of logging and associated development on Southeast Alaska residents?

This issue reflects concerns about community employment and stability, and maintaining Alaskan lifestyles.

Implementation of the Selected Alternative authorizes harvest of approximately 67 million board feet of timber volume. Additionally, it authorizes 42.5 miles of road construction and construction of two LTFs. Specified harvest of this level maintains approximately 303 jobs directly related to timber harvest, road construction, and wood product processing. This level of harvest also maintains approximately 72 jobs in indirect employment associated with the service and support sectors. This results in 375 jobs maintained, with a value of \$13.2 million of personal income from wages and salaries.

None of the alternatives are projected to have any effect on income or employment opportunities in the sport or commercial fishing industries or those related economic sectors. Timber harvest activities may displace outfitter/guide use of portions of the Project Area until a few years after completion of harvest activities. Marketable recreational experience will change from a wildland experience to a roaded modified experience in areas affected by timber harvest activities. Because of the availability of alternative areas that could provide similar commercial opportunities, and because the Selected Alternative affects only some of the inventoried Recreation Places in the Project Area, no significant impact is expected on employment and income opportunities in the recreation and tourism industry.

Using the pond log values and logging costs from the fourth quarter of 1993, and normal (100 percent) profit and risk, the resulting estimated net stumpage value is positive for both sales.

The Selected Alternative, therefore, will be an economical offering under current and anticipated future market conditions. The estimated net stumpage value for each independent sale is shown in Table 1.

Issue 5: How Will Timber Harvest and Road Building Activities Affect Wildlife Habitat?

This issue includes concern over several wildlife species and habitat important to maintenance of wildlife populations.

The greatest direct effect to wildlife habitats will be the loss of old-growth habitat and change of forest habitat. Special emphasis habitats such as beach and estuary fringe are largely protected through timber harvest unit and road location. Old-growth habitat will be reduced by 14 percent.

All action alternatives, including the Selected Alternative, will decrease habitat capabilities for the Management Indicator Species (MIS) as much as 19 percent, but in most cases, less than 12 percent. Habitat capability is calculated utilizing models and does not necessarily indicate current or future populations, but rather is a means to measure potential effects.

The Project Area will remain a diverse and largely natural environment. In general, wildlife habitats will remain well connected by beach and estuary fringe, stream corridors and the myriad of muskegs, steep slopes, and areas not scheduled for harvest. Areas of undisturbed old growth that protect natural ecosystem processes and landscape scale wildlife species are maintained (see Figure R-1). Those areas of old growth that are not altered by the activities proposed in the Selected Alternative will retain their habitat characteristics. There are no large or medium Habitat Conservation Areas (HCAs) recommended for the Project Area by the Population Viability Committee to prevent wildlife habitat fragmentation (Final EIS, Chapter 4). Roads will not be maintained for vehicle travel following project completion, thus wildlife will not be affected by additional access (see RMOs in Appendix 3).

Issue 6: How would timber harvest, road building activities, and LTFs affect fish and shellfish habitat?

This issue addresses public concern for protecting streams that provide habitat to anadromous and resident fish and for protecting shellfish habitat in the marine environment.

Chapter 2 of the Final EIS concludes that the potential effects on fish and shellfish are minimal for all alternatives. All alternatives are designed and expected to meet the requirements of the Clean Water Act. Implementation of the Tongass Timber Reform Act (TTRA) requirements to provide a minimum 100-foot buffer on Class I streams and Class II streams flowing directly into Class I streams will prevent direct stream channel impacts from timber harvest and road construction. Adherence to Best Management Practices (BMPs) outlined in the Soil and Water Conservation Handbook (FSH 2509.22) during timber harvest and road construction activities will minimize the potential for impacts on fish habitat.

No significant changes in stream temperature regimens, large woody debris recruitment, or stream nutrient cycles are expected as a result of the timber harvesting activities. Riparian buffers as prescribed on the unit and road cards in Appendix C of the Final EIS and ROD Appendix 2 will minimize any adverse effects to water quality and fish habitat resulting from the authorized activities. Harvest units have been designed to minimize the potential for blowdown adjacent to streams.

Application of the LTF siting guidelines developed by the Alaska Timber Task Force will minimize the potential effects of LTFs on shellfish populations. Construction of drive-down type LTF facilities with a "no-splash" operation is authorized at Poison Cove and Goal Creek.

Record of Decision

Log transfer facility development is contingent upon approval of permits obtained from those agencies identified at the end of Final EIS Chapter 1. Should the permitting process result in significant changes to either the location or design of one or more of the log transfer facilities, such changes would be evaluated in an interdisciplinary manner according to NEPA and the results of the analysis documented. If such changes are significant, then my decision would be supplemented prior to development of the log transfer facility.

Public Involvement

Public involvement has been instrumental in identifying issues, formulating alternatives, and influencing this decision. Public scoping and involvement activities for the Ushk Bay project are listed in Appendix B of the Final EIS. A summary of the significant issues used to govern the interdisciplinary analysis was provided in the previous section of this document and in Chapter 1 of the Final EIS.

Coordination with Other Agencies

From the time scoping was initiated, meetings and other contacts with interested State and Federal agencies have occurred. Issues were discussed and information was exchanged. Appendix B of the Final EIS lists the meetings and chapter 6 identifies the agencies who were informed of, and/or involved in the planning process. The U.S. Army Corps of Engineers and U.S. Environmental Protection Agency were cooperators under provisions of the National Environmental Policy Act because of their role in issuing LTF permits.

Alternatives

Alternatives Considered in Detail

The following six alternatives were considered in detail in the Final EIS. For a complete description of these alternatives, refer to chapter 2 of the Ushk Bay Final EIS. At the conclusion of this section, Table 2 lists the scheduled activities and major outputs for each of the six alternatives considered in detail along with the Selected Alternative.

Alternative A. The theme of this alternative is to propose no timber harvest or road construction in the Ushk Bay Project Area. A “No Action” alternative is required by NEPA, and this alternative serves as the benchmark by which effects of the action alternatives are measured. Implementation of TLMP to meet Forest Service goals would likely require timber harvest in the Project Area at some time in the foreseeable future, even if this “No Action” alternative was adopted in this decision.

Alternative B. The theme of this alternative is to consolidate timber harvest in areas accessible to proposed LTFs in Ushk Bay and Poison Cove, with no road connection between the two LTFs, and avoid harvest of timber in the area near Deep Bay and along Peril Strait.

Alternative C. The theme of this alternative is to distribute timber harvest throughout the Project Area, with no road connections between the LTFs, but with selective harvest along Peril Strait to mitigate visual effects.

Alternative D. The theme of this alternative is to distribute a light timber harvest throughout the Project Area to facilitate a later entry to provide areas of different forest vegetation age classes within the Project Area. This alternative would include a road connection between

LTFs in Ushk Bay, Deep Bay, and Poison Cove for recreational use.

Alternative E. The theme of this alternative is maximizing availability of timber within the Project Area that meets TLMP standards and guidelines, while avoiding an LTF in Deep Bay

Table 2

Activities and Outputs (by Alternative)

	<i>A</i>	<i>B</i>	Alternative		<i>E</i>	<i>F</i>	Selected Alternative
	<i>C</i>	<i>D</i>					
<i>Total Acres Harvested</i>	0	1,670	3,096	1,430	2,783	1,898	2,166*
<i># Harvest Units</i>	0	54	90	46	93	58	60
<i>Average Size Harvest Units (Ac.)</i>	0	31	30	31	30	33	33
<i>Roads (Mi.)</i>	0	36	62	49	65	47	42
<i>Number of LTFs</i>	0	2	4	3	3	1	2
<i>Number of Camps</i>	0	1	1	1	1	1	1
<i>Volume - Net Sawlog plus Util. (MMBF)</i>	0	50.6	84.8	46.5	90.3	62.4	67.2*
<i>Employment (Number of Jobs)</i>	0	290	478	299	509	359	375

* includes inter-unit road right-of-way

by proposing a road connection between the Deep Bay drainage and the LTF in Ushk Bay.

Alternative F. The theme of this alternative is avoiding LTFs and logging camps in Ushk and Deep Bays, minimizing timber harvest and LTFs in the visually sensitive areas along Peril Strait, but to otherwise maximize availability of timber.

**Alternative
Eliminated from
Detailed
Consideration**

An alternative which eliminated harvesting timber in the drainages tributary to Ushk Bay and which consolidated the harvest in other drainages of the Project Area was considered. The total recoverable volume from such an alternative would be so low that it would not be economically reasonable, therefore this alternative was eliminated from more detailed consideration. The alternative of avoiding timber harvest in the Ushk Bay drainages is embodied in the No Action alternative.

**Environmentally
Preferred Alternative**

There is no single factor that can be used to determine which alternative is environmentally preferred. Maintaining the basic productivity of the land and the quality of lifestyle of the local residents are vitally important.

Record of Decision

Based on the comparison of the alternatives shown in Table 2 and as displayed in chapter 2 and 4 of the Final EIS, Alternative A, the “No Action” alternative, would cause the least environmental disturbance. Among the action alternatives, Alternative B is the environmentally preferred alternative. This alternative has the second lowest level of acres proposed for harvest but has the fewest miles of road construction and associated stream crossings, and avoids Deep Bay and the visually sensitive area along Peril Strait.

The Selected Alternative is more environmentally preferred than Alternatives C, D, E, and F because of modifications incorporated in response to comments on the Draft EIS which mitigate potentially adverse environmental effects. The minimum number of LTFs is proposed to harvest the volume authorized, some units are dropped or unit boundaries adjusted to provide additional watershed and fisheries protection, Deep Bay is avoided, and selective harvest is prescribed for the visually sensitive area along Peril Strait.

Mitigation

Applicable standards and guidelines of the Tongass Land Management Plan of 1979 (as amended), the Draft Tongass Land Management Plan Revision, the Alaska Regional Guide, and applicable Forest Service Manuals and Handbooks will minimize or negate many potentially adverse environmental effects from timber harvest and road construction. Water quality and fisheries habitat are protected through the application of Best Management Practices (BMPs) stated in the Soil and Water Conservation Handbook (FSH 2509.22) and the direction contained in the Aquatic Habitat Management Handbook (FSH 2609.24). In addition, the Tongass Timber Reform Act (TTRA) requires a minimum 100-foot buffer for all Class I streams and Class II streams directly flowing into Class I streams. The buffers and other stream protection measures adopted in this decision equal or exceed Tongass Timber Reform Act requirements.



Measures were applied in the development of the project alternatives, including the Selected Alternative, and in the location of the harvest units and road corridors to avoid, reduce, minimize or eliminate the adverse affects of timber harvest related actions. The Mitigation Measures section of Chapter 2 of the Final EIS discusses those measures common to all alternatives. Mitigation measures adopted include all practicable means to avoid or minimize the environmental harm from the proposed actions (40 CFR 1505.2(b)). The Final EIS includes Harvest Unit Cards and Road Cards (Appendix C) which incorporate site-specific mitigation. A more detailed description of the Selected Alternative mitigations is included below.

In the Selected Alternative, a number of measures to protect water quality and fish production have been included. Class III streams will be protected to prevent impact on downstream Class I or II streams as well as to prevent sedimentation and soil erosion. Unit 33, in the Poison Cove vicinity, has been dropped specifically to protect fish habitat and production. Several units and sections of units have also been dropped in order to provide additional protection to water quality and fisheries habitat.

Mitigation measures and BMPs designed to protect water quality and fisheries habitat will likewise reduce impacts on forest soils. Soils with an extreme mass-wasting hazard have been avoided in the design of harvest units. Partial or full suspension of logs during yarding will be required in areas of units with high hazard soils. Trees will be felled away from v-notches and split yarding of v-notches will be required. In the Selected Alternative, a number of units and parts of units have been dropped in order to reduce impacts on forest soils. For example, Unit 81 and the western portion of Unit 12 were dropped due to their close proximity to a slide area. Settings in FEIS Units 75, 4, and 86 have been dropped because of the presence of v-notches and high hazard soils. Past experience indicates these measures are effective. In two

units (8 and 90), there will be areas in which only 30% of the existing volume will be harvested. Harvest will be done in such a way that the remaining standing timber is feathered, reducing the risk of blowdown and resulting impacts on soils, particularly in adjacent stands. Selective harvest and feathering have not been widely used in Southeast Alaska, but the location of the two areas, both topographically and in relation to adjacent stands, in conjunction with the layout directions and harvest method, should ensure that adverse effects on soils are minimized.

No logging camp or log transfer facility will be located in Ushk Bay. This is being done in response to the numerous comments from the public, as well as state and federal agencies about potential biological and sociological adverse impacts. This decision will avoid potential conflicts over recreational anchorages and subsistence crabbing in Ushk Bay.

Three areas along Peril Strait have been identified for uneven-aged management by the group selection method. Group selection cutting as an alternative to clearcutting was originally proposed in Alternative C. In that alternative, there are six group selection areas in which approximately 25% of each area would be harvested in one to two acre groups. The primary reason for proposing this rather than clearcutting was to reduce the visual impact as viewed from boats in Peril Strait. The Selected Alternative goes even further in this respect. Here there are three group selection areas from which 15% (Group III), 20% (Group II) and 25% (Group I) of the acres will be harvested. Harvest will be by helicopter, reducing associated impacts of road building on visual and other resources. Openings will be located and shaped so as to minimize their visibility from Peril Strait. The three areas will be managed on a 120- to 200-year rotation. The extended rotations are consistent with the direction in the 1985-86 Amendment to TLMP for Visual Management Class I areas in LUD III and IV VCUs.

Further measures to decrease impacts to the visual and recreation resources are dropping highly visible sections of units, and feathering the boundaries of some of the more visible units. See Unit Cards in Final EIS Appendix C for a more detailed description. Uneven aged management by group selection and unit boundary feathering have been done on a very limited scale in Southeast Alaska. Preliminary evidence is that these measures do reduce adverse effects to the visual and recreation resource.

To avoid adverse effects on wildlife habitat values, units were located outside of the beach and estuary fringe habitats wherever practicable, thereby reducing the potential to adversely impact high value habitats. Maintaining travel corridors for wildlife and retention of snags (where safe to do so) are measures individually identified on the road or unit cards in the Final EIS (Appendix C) which minimize adverse effects to wildlife. Additionally, all roads are to be closed following the completion of sale activities. Drainage structures may be removed if necessary for long-term resource protection and erosion control (waterbars, grass seeding) will be performed. Dropping all units in the vicinity of Deep Bay will reduce the acres of old-growth harvest and consequently reduce adverse effects to wildlife habitat. These measures have been used effectively in the past throughout Southeast Alaska.

To manage for subsistence resources, those measures which protect fish and game resources also generally serve to protect the availability of subsistence resources. For the Selected Alternative, as mentioned above, all roads will be closed following completion of sale activities. Past experience indicates that this is an effective measure to limit non-traditional use. The lack of a camp facility or LTF in Ushk Bay will also have the effect of limiting non-traditional use in this area, thereby protecting the availability of subsistence resources in Ushk Bay.

Monitoring and Enforcement

A monitoring program is the process by which the Forest Service can evaluate whether or not the resource management objectives of the Final EIS have been implemented as specified, and

Record of Decision

whether or not the steps identified for mitigating the environmental effects were effective. Three levels of monitoring are recognized. The first two levels, implementation monitoring and effectiveness monitoring, are feasible at the project level. The third level, validation monitoring, is conducted at the Forest wide level.

Applicable Monitoring requirements are specified in Appendix I of the Final EIS and ROD Appendix 5. For each monitoring item, an objective, desired result, method of measurement, threshold and corrective action are identified, along with the responsible staff. Monitoring activities may reveal results that deviate from planned effects, in which case corrective actions are prescribed (40 CFR 1505.2(c)).

The Chatham Area Forest Supervisor is responsible for ensuring that project implementation, mitigation, monitoring and enforcement is accomplished as specified.

Findings Required by Law

National Forest Management Act

The National Forest Management Act (NFMA) requires specific determinations in this Record of Decision including consistency with existing Forest Plans and Regional Guides. It also requires a determination of clearcutting as the optimal method of harvesting and specific authorization of clearcuts over 100 acres in size.

Tongass Land Management Plan and Alaska Regional Guide. This decision is consistent with the Alaska Regional Guide and the Tongass Land Management Plan of 1979, as amended. I have reviewed the management direction and the schedule of activities for the VCU's included in the Selected Alternative, and find the Selected Alternative to be consistent with these elements. The areas of undisturbed old-growth wildlife habitat maintained in this alternative exceed the standards for retention established in TLMP.

Although not required, the activities authorized in this decision are consistent to the extent practicable with the proposed standards and guidelines and management prescriptions of the Proposed Revised Forest Plan.

Clearcutting as the Optimal Method of Harvesting. The Alaska Regional Guide established silvicultural and management standards for western hemlock - Sitka spruce forest type (Alaska Regional Guide, page 3-18). Even-aged management in the form of clearcutting is, according to the Regional Guide, to be used where the management objective is to meet timber production objectives established in the Forest Plan, where there is a risk of dwarf mistletoe reinfection and where risk of windthrow is determined to be high. Dwarf mistletoe is somewhat of a problem in the Ushk Bay Project Area, particularly on the north shore of Ushk Bay. All of the harvest units being proposed in the Selected Alternative have a high risk of windthrow. All units in the Selected Alternative, except the three Groups and the two units (8 and 90) with areas of selective harvest and feathering, both discussed in the Mitigation section, are prescribed for clearcut harvest. Clearcutting of the proposed harvest units will meet the objective of maintaining fast-growing, mistletoe-free stands of mixed species and is the optimum method of harvesting, considering the following factors referenced in the Alaska Regional Guide:

The thin bark and shallow roots of hemlock and spruce make them particularly susceptible to logging injury, which leads to decay. Losses from decay fungi are high, especially in the old-growth forests of Alaska. Conversion from old to young growth by clearcutting has the greatest potential for reducing decay.



Hemlock dwarf mistletoe, *Arcanthobium tsugense*, an important disease of western hemlock can best be controlled by clearcutting. Elimination of residual overstory trees infected with dwarf mistletoe prevents infection of western hemlock in the new stand.

Exposure to the sun raises soil temperature, which speeds decomposition, thereby improving the productivity of northern sites.

Clearcutting favors regeneration of Sitka spruce by destroying advance hemlock regeneration and by creating more favorable conditions for post-logging reproduction of spruce.

Risk of blowdown in residual stands is eliminated. The chance of blowdown along cutting boundaries is increased but can be reduced through proper design of cutting units.

Natural seed fall is generally adequate for regeneration and most young stands are dense.

Logging costs are lower than with other systems.

Clearcuts Over 100 Acres in Size. Unit 13 is 121 acres and is the only unit that exceeds 100 acres. Unit 13 exceeds 100 acres because of natural and biological hazards to residual trees and surrounding stands and logging system and transportation system requirements as allowed for in the Alaska Regional Guide. This unit was clearly displayed for comment during the 75-day review of the Draft EIS. This 75-day public comment period meets the requirements of the Alaska Regional Guide for approval of units over 100 acres. Based on public review and the reasons listed for the unit being greater than 100 acres above, this unit is authorized for harvest as designed.

Tongass Timber Reform Act

Harvest units were designed and will be located to maintain a minimum 100-foot buffer zone for all Class I streams and Class II streams that flow directly into Class I streams as required in Section 103 of the TTRA. The actual widths of these buffer strips will often be greater than the 100-foot minimum. The design and implementation direction for the Selected Alternative incorporate BMPs for protection of all stream classes.

Per Section 301 of the TTRA, the Ushk Bay Project was planned, management requirements were applied, and environmental analysis procedures were followed consistent with procedures for independent National Forest timber sales. Section 301(c)(2) of the TTRA modified the Alaska Pulp Corporation (APC) and Ketchikan Pulp Company contracts to require proportional harvest of Volume Classes 6 and 7 timber. The statute does not impose proportional harvest as a requirement on independent sales. The APC long-term contract termination eliminates proportional harvest as an applicable statutory requirement for the Ushk Bay Selected Alternative that will be implemented through independent timber sale contracts. However, analysis of proportional harvest of Volume Classes 6 and 7 was performed using the procedures in Forest Service Sale Preparation Handbook 2409.18, Region 10 Supplement No. 2409.18-93-3 for the Selected Alternative. It was determined that upon completion of the Selected Alternative's harvest, proportionality consistent with FSH 2409.18 direction for Management Areas C39 and C40 will result. Refer to ROD Appendix 4 for the analysis of the proportion of Volume Classes 6 and 7 planned for harvest with the Selected Alternative. Forest Service methodology used to implement section 301(c)(2) has been challenged in court, in Wildlife Society et al. v. Barton, J93-001 CIV (D. Alaska). An alternative methodology is being evaluated but is not available at this time.

Record of Decision

Endangered Species Act

The Selected Alternative will not have a direct, indirect, or cumulative effect on any threatened, endangered or sensitive species in the Ushk Bay Project Area. A biological assessment is included in Appendix J of the Final EIS. I have determined that this action will not have any adverse impacts on any threatened or endangered species.

Bald Eagle Protection Act

The Selected Alternative will not have a direct, indirect, or cumulative effect on any bald eagle.

Management activities inconsistent with current bald eagle use within 330 feet of an eagle nest tree are restricted by a 1990 Memorandum of Understanding (MOU) between the Forest Service and the U. S. Fish and Wildlife Service to facilitate compliance with the Bald Eagle Protection Act. Three variances from the MOU have been obtained for implementation of the Selected Alternative for construction of roads within 330 feet of known eagle nest trees. A variance has also been issued for conducting helicopter operations within 1/4 mile of eagle nests and documentation is included in Appendix N of the Final EIS.

Clean Water Act

The location of harvest units and roads for the Selected Alternative was guided by standards, guidelines, and direction contained in the current TLMP, the proposed TLMP Revision, the Alaska Regional Guide, and applicable Forest Service manuals and handbooks. The unit cards and road cards (Appendix C in the Final EIS and ROD Appendix 2) contain specific details on practices prescribed to prevent or reduce non-point sediment sources. Implementation with site specific application and monitoring of approved BMPs, will comply with applicable State Water Quality Standards Regulations. These regulations provide for variances from antidegradation requirements and water quality criteria. The harvest and road building operators will be responsible for compliance, including obtaining any variance required by the State, and will be monitored for compliance by the Forest Service. The Forest Service expects the Ushk Bay Project activities to fully qualify for any variance required by the State, according to the criteria in 18 AAC 70.015.

A monitoring plan to detect and evaluate possible effects of bark accumulations, oil sheens, and surface runoff will be implemented as a part of the permitting process for log transfer facilities (BMP 14.4, FSH 2509.22).

National Historic Preservation Act

Cultural resource surveys have been conducted in the Project Area. The State Historic Preservation Officer has been consulted, and the provisions of 36 CFR part 800 have been complied with. The Forest Service timber sale contract contains enforceable measures for protecting any undiscovered cultural resource that might be encountered during sale operations. All ground-disturbing activities associated with this action have received cultural resource clearance by the State Historic Preservation Officer. Based on surveys conducted by professional archaeologists in the project area, I have determined, there will be no significant effects on cultural resources.

Federal Cave Resource Protection Act of 1988

The actions in the Selected Alternative will not have a direct, indirect, or cumulative effect on any significant cave in the Ushk Bay Project Area. No cave resources have been documented in the Project Area and field work done for this analysis failed to discover any caves (Final EIS, Chapter 3).

Subsistence Finding: ANILCA Section 810

A subsistence evaluation was conducted for the six alternatives considered in detail in accordance with ANILCA Section 810. An open house followed by an ANILCA Section 810 hearing was held in Sitka on July 19, 1993.

The evaluation of comments from the public, subsistence hearing testimony, and additional

analysis, indicates the following:

The potential foreseeable effects from the action alternatives in the Ushk Bay Project Area do not indicate a significant possibility of a significant restriction of subsistence uses for brown bear, furbearers, marine mammals, waterfowl, and other foods such as berries and roots.

There is a significant possibility of a significant restriction of subsistence use of Sitka black-tailed deer in the Project Area, regardless of which alternative is implemented, including the "No Action" alternative. This possibility of restriction of subsistence use is for the communities of Haines, Petersburg, Sitka, and Wrangell.

Among these communities, there is sufficient habitat capability in Wildlife Analysis Areas where residents successfully harvest deer to meet subsistence needs of all communities in the foreseeable future except for Sitka.

There is also a significant possibility of a significant restriction of subsistence use of fish and shellfish, based on changes in access during the period of active timber harvest, for alternatives that include an LTF or logging camp in Ushk Bay.

Based on a review of the subsistence hearing testimony and the analysis conducted in the Final EIS, it is apparent that all of the action alternatives involve some potential to impact subsistence uses. There is no alternative that would meet TLMP direction and yet avoid a significant possibility of a subsistence restriction somewhere in the Forest. Therefore, based on the analysis of the information presented in the Final EIS, it is my determination these actions are necessary, consistent with sound management of public lands.

The amount of public land involved to implement the Selected Alternative is (considering sound multiple-use management of public lands) the minimum necessary. Conversion of old-growth forest into second-growth forest affects habitat capability for deer and other old-growth dependent species wherever it occurs on the Tongass National Forest, and habitat is used forestwide by such species.

The entire Tongass National Forest is used by one or more rural communities for subsistence purposes for deer hunting (TRUCS, Forest Service 1990b). The areas of most subsistence use are the areas adjacent to existing road systems, beaches and the areas in close proximity to the communities. Much effort was taken to protect the highest value subsistence areas. For example, beach fringe is one of the highest use subsistence areas and three percent or less will be impacted with the Selected Alternative.

It is not possible to lessen harvest in one area and concentrate it in another without impacting one or more rural communities' important subsistence use areas. In addition, harvestable populations of game species could not be maintained in a natural distribution across the Forest if harvest was concentrated in specific areas. A well-distributed population of species is also required by the Forest Service regulations implementing the NFMA. Therefore, I conclude the acres scheduled for harvest in the Selected Alternative meet sound multiple-use management of public lands, and involve the minimum amount of public land used for subsistence. Furthermore, the Selected Alternative resolves resource concerns reflected in the public issues associated with this EIS.

Impacts on subsistence have been minimized through the development of the individual harvest units and road corridors, and through the formulation of the alternatives. Mitigation measures applicable to all resources including subsistence are described in this ROD. It is my determination that reasonable measures to minimize impacts on subsistence have been adopted to the maximum extent practicable while still meeting the purpose and need for this project.

The Selected Alternative reflects special efforts by the Forest Service to minimize the effects on resources used for subsistence by those rural communities that would be most likely to receive the highest priority in the event of an ANILCA section 804 "Tier II" restriction.

Record of Decision

Executive Orders 11988 and 11990

Executive Order 11988 directs Federal agencies to take action to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains. The numerous streams in the Ushk Bay Project Area makes it impossible to avoid all floodplains during timber harvest and road construction. The design of the Selected Alternative and the application of Best Management Practices combine to minimize adverse impacts on floodplains.

Executive Order 11990 requires Federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the destruction or modification of wetlands. The Selected Alternative avoids most identified wetlands, however many small wetlands or muskegs occur as inclusions within forested areas. These areas may be altered by timber harvest or road construction, however techniques and practices required by the Forest Service serve to maintain the wetland attributes. It is estimated there will be no net loss of wetlands with any of the alternatives. Soil moisture regimes and vegetation on some wetlands may be altered in some cases; however, these altered acres would still be classified as wetlands and function as wetlands in the ecosystem.

Coastal Zone Management Act

The Coastal Zone Management Act of 1976 (as amended) excludes Federal lands from the Coastal Zone. However, the act requires that when Federal agencies conduct activity or undertake development affecting the coastal zone, they be consistent to the maximum extent practicable with the approved State Coastal Management Program.

The Alaska Coastal Management Plan incorporated the Alaska Forest Resources and Practices Act of 1979 (as revised) as the applied standards and guidelines for timber harvesting and processing. The Forest Service Standards and Guidelines and Mitigation Measures described in Chapter 2 of the Final EIS are fully consistent with the State Standards.

Based on the analysis in the Final EIS, review of the Alaska Forest Practices Act, and comments from the City of Sitka and State agencies on the DEIS, the action and activities are consistent to the maximum degree practicable with the Alaska Coastal Management Plan.

Federal and State Permits

Federal and State permits necessary to implement the authorized activities are listed at the end of Chapter 1 of the Final EIS. These permits are results of the National Policy and Laws briefly described above.

Implementation of This Decision

Implementation of this decision may occur no sooner than 50 days from the date of publication of the notice of the decision in the Juneau Empire, the official newspaper of record.

This project will be implemented in two or more timber sales in accordance with Forest Service Manual and Handbook direction for Timber Sale Project Implementation in FSM 2432.3 Gate 3 and FSH 2409.18 Sale Prep. This direction provides a bridge between project planning and implementation, and will ensure execution of the actions, environmental standards, and mitigations approved by this decision, and compliance with TTRA and other laws.

Implementation of all activities authorized by this Record of Decision will be monitored to ensure that they are carried out as planned and described in the Final EIS, ROD, and planned unit and road cards, unless they are modified consistent with direction in FSM 2432.3 and FSH 2409.18.

Appendix C of the Final EIS and ROD Appendix 2 contain the planned unit and road cards. These cards are an integral part of this decision because they document the specific resource



concerns, management objectives, and mitigation measures to govern the layout of the harvest units and construction of roads. These cards will be used during the implementation process to ensure that all aspects of the project are implemented within applicable standards and guidelines and that resource impacts will not be greater than those described in the EIS. Similar cards will be used to document any changes to the planned layout as the actual layout and harvest of the units occurs with project implementation. The implementation record for this project will display each harvest unit, transportation facility, and other project components as actually implemented, any proposed changes to the design, location, standards, and guidelines, or other mitigation measures for the project, and the decisions on the proposed changes.

Any proposed changes to authorized project actions will be fully subject to an interdisciplinary review process and the documentation, public involvement, and other requirements of the National Environmental Policy Act (NEPA), the National Forest Management Act of 1976 (NFMA), section 810 of the Alaska National Interest Lands Conservation Act (ANILCA), the Tongass Timber Reform Act (TTRA), the Coastal Zone Management Act (CZMA), and other laws concerning proposed actions.

The Forest Supervisor will determine whether further NEPA, ANILCA, TTRA or other documentation or disclosure, opportunity for public involvement, or other action is necessary before proceeding with any action that deviates from the planned activity. Connected or inter-related proposed changes regarding particular areas or specific activities will be considered together in making this determination. Cumulative impacts will be considered.

In determining whether and what kind of further NEPA action is required, the Forest Supervisor will consider the criteria for whether to supplement an existing Environmental Impact Statement in 40 CFR 1502.9(c), and in particular, whether the proposed change is a substantial change to the selected alternative as planned and already approved, and whether the change is relevant to environmental concerns. As part of this determination, the Supervisor will review whether the change would as an initial proposed action be categorically excluded from preparation of an Environmental Assessment (EA) or EIS on the basis of criteria in FSH 1901.15, Chapter 30. A determination that correction, supplementation, or revision of the EIS or ROD is not required will be documented in a project implementation file memorandum. FSH 1909.15, Sections 18.1 and 18.2.

Many minor changes to harvest units, transportation facilities, or other project components may be categorically excluded from documentation in an EA or EIS or otherwise not require an existing EIS or ROD to be corrected, supplemented, or revised. Besides documentation in a project implementation file memorandum, these minor changes may still require appropriate scoping, environmental analysis, documentation in a Decision Memo, and public notice to comply with FSH 1909.15.

Record of Decision

Right to Appeal

This decision is subject to administrative appeal. Organizations or members of the general public may appeal this decision according to Title 36 Code of Federal Regulations (CFR) 215. The appeal must be filed within 45 calendar days of the date that legal notification of this decision is published in the Juneau Empire, the official newspaper of record. The Notice of Appeal must be filed with:

Phil Janik
Regional Forester
USDA Forest Service, Region 10
P.O. Box 021628
Juneau, AK 99802-1628

It is the responsibility of those who appeal a decision to provide the Regional Forester sufficient narrative evidence and argument to show why the decision by the Forest Supervisor should be changed or reversed. Copies of 36 CFR 215 are available from any Forest Service Office.

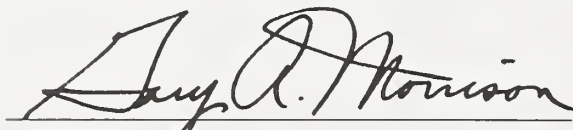
The first timber sale is planned to be made available as part of the current timber supply in September 1995. Implementation of this action can begin 5 business days from the close of the 45 day appeal filing period.

An appeal of this decision would evoke a stay of implementation of the Selected Alternative until fifteen days after the appeal decision.

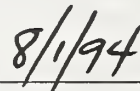
Contact Person

For additional information concerning the specific activities authorized with this decision contact the Ushk Bay Planning team:

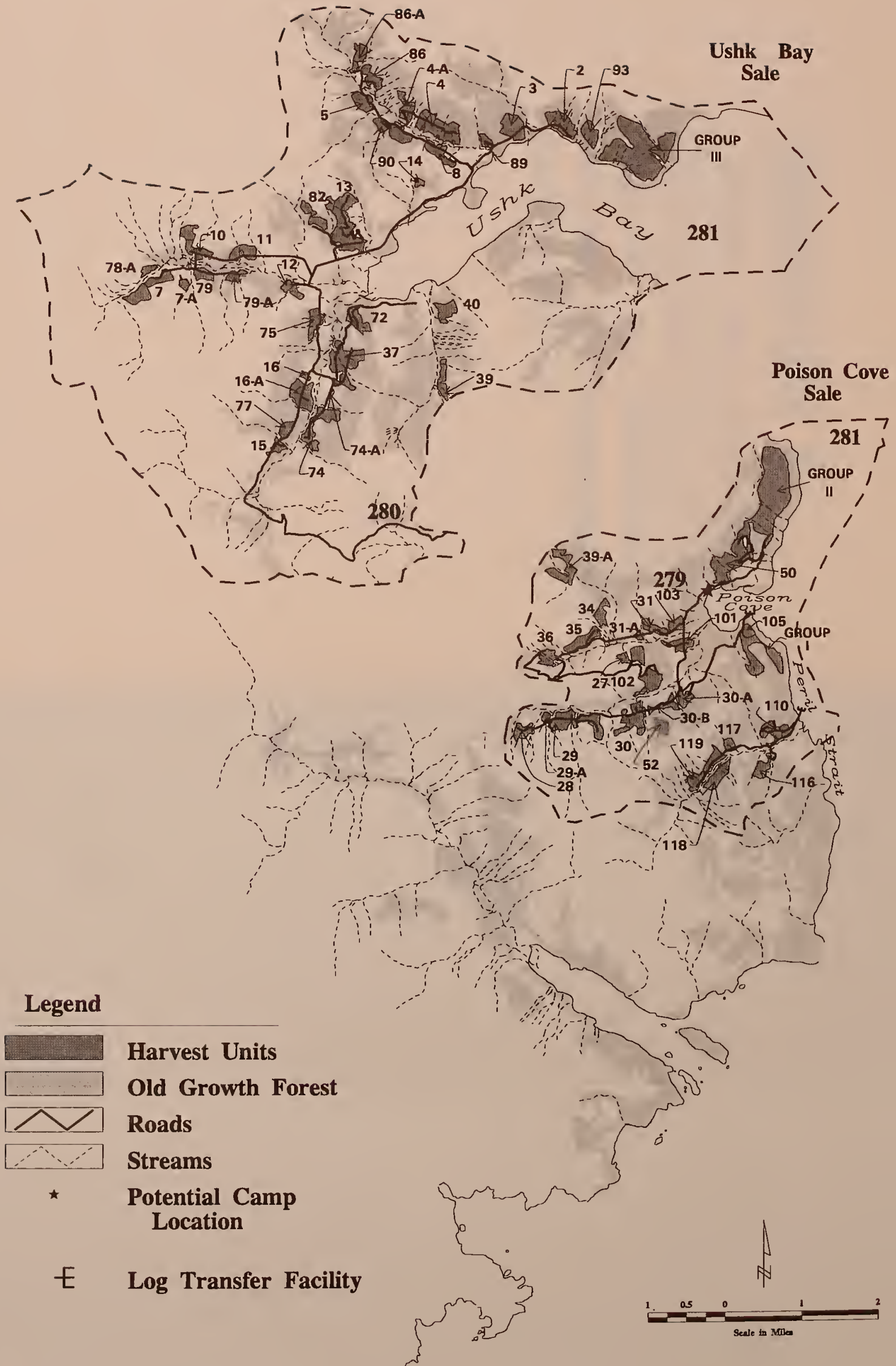
Michael J. Weber
Ushk Bay Planning Team
Chatham Area, Tongass NF
204 Siginaka Way
Sitka, Alaska 99835
(907) 747-6671









GARY A. MORRISON
Forest Supervisor, Chatham Area



Date



Legend

-  **Harvest Units**
-  **Old Growth Forest**
-  **Roads**
-  **Streams**
-  **Potential Camp Location**
-  **Log Transfer Facility**



Appendix 1

**Harvest Units Specific to
the Selected Alternative;
Post-harvest Silvicultural
Treatments; Enhancement
Opportunities**

Table 1-1A

Poison Cove Selected Alternative Volumes

VCU	Harvest Unit	Live Skyline	Highlead	Helicopter	Running Skyline	Slackline	Shovel	Total Acres	Total Volume (MBF)
279	27	32.10						32.10	813
	30A				2.50	17.80		20.30	683
	31				9.30	12.40		21.70	612
	31A				5.30			5.30	118
	50				4.40	81.10		85.50	3157
	101						27.10	27.10	1024
	102	18.10		6.00		16.10		40.20	1482
	103				17.80			17.80	537
	105				9.10	2.20		11.30	382
	110		30.40		13.00			43.40	1119
	116		24.90					24.90	378
	117		10.40					10.40	301
	Gr 1			16.00				16.0*	500
	Gr 2			53.00				53.0*	1417
279	Totals	50.20	65.70	75.00	61.40	129.60	27.10	409.00	12523
280	28	24.00						24.00	591
	29		11.70		40.80	22.10		74.60	2347
	29A				7.40			7.40	247
	30	8.90	5.90	20.50	3.70	20.70		59.70	1456
	30B				19.40			19.40	473
	34			22.70				22.70	620
	35				29.40	10.10		39.50	1424
	36	23.30						23.30	708
	52			19.90				19.90	480
	118					34.50		34.50	1337
	119					48.30		48.30	1524
280	Totals	56.20	17.60	63.10	100.70	135.70		373.30	11207
281	39A			47.00				47.00	2044
281	Totals			47.00				47.00	2044
Poison Cove Unit Totals		106.40	84.30	185.10	162.10	265.30	27.10	829.30	25774
Inter-unit ROW								65.40	1635
Poison Cove Selected Alternative Totals								894.70	27409
* Actual Harvest Acres									
Note: Volumes are Net Sawlog plus Utility									
Source: Smith, 1994									

Table 1-1B

Ushk Bay Selected Alternative Volumes

VCU	Harvest Unit	Live Skyline	Highlead	Helicopter	Running Skyline	Slackline	Shovel	Total Acres	Total Volume (MBF)
281	2	9.5			40.2			49.7	1474
	3					43	7.8	50.8	1733
	4	8.5			37.6	39.9		86	4090
	4A		10.8	12.3				23.1	1099
	5				29.3			29.3	604
	7	23.8		32.3				56.1	1172
	7A				9.5			9.5	141
	8				27.3		2.2	29.5*	794
	10			23.1	21			44.1	1211
	11	20.8			6.9		4	31.7	1090
	12	22.1						22.1	721
	13	46.7	9.7	13.1	36	15.6		121.1	3553
	14			7				7	73
	15				5.3		10.3	15.6	594
	16					5.6		5.6	118
	16A				8.3	30.8	14.9	54	2297
	37	63.4			7.3		15.1	85.8	2503
	39			31.2				31.2	1362
	40			31.6				31.6	881
	72	3.5			9.9	20.4		33.8	1422
	74	33.9					22.9	56.8	1318
	74A	2.1						2.1	44
	75	30.5						30.5	912
	77	16.8						16.8	683
	78A		11.1					11.1	431
	79				8.1		12.1	20.2	720
	79A				14.8			14.8	571
	82			12.8	16.2			29	1031
	86				21			21	905
	86A			20.6	5		1.3	26.9	672
	89				12.6			12.6	581
	90				42.6			42.6*	1406
	93				14.7	17.1		31.8	460
	Gr 3			38				38.0*	1137
Ushk Bay Unit Totals		281.6	31.6	222	373.6	172.4	90.6	1171.8	37803
Inter-unit ROW								99.6	1992
Ushk Bay Selected Alternative Totals								1271.4	39795

* Actual Harvest Acres

Note: Volumes are Net Sawlog plus Utility

Source: Smith, 1994



Post-Harvest Silvicultural Treatments

Post harvest silvicultural treatments that will occur in the Ushk Bay Project Area after timber harvest include hand planting and precommercial thinning of proposed harvest units. Table 1-2 displays a list of Selected Alternative units that may be hand planted. Actual planting acres will be determined by regeneration survey results and will likely include parts of units rather than entire units. Alaska yellow cedar and Sitka spruce will be planted in order to maintain current species composition and wildlife habitat diversity, and to meet NFMA requirements for adequate stocking.

Table 1-2

Selected Alternative - Potential Hand Planting

VCU	Total Acres	Species to Plant	Harvest Units
281	50	Alaska cedar	2
	100		7, 10
	30		8
	54	Sitka spruce	11, 12
	78		39, 39A
	50		72, 77
Total	266		

Source: Smith, 1994

Precommercial thinning to improve stand vigor and timber production is proposed for the Selected Alternative units in Table 1-3. These units will be evaluated for thinning needs 10 to 12 years following harvest.

Table 1-3

Selected Alternative - Potential Precommercial Thinning

VCU	Total Acres	Harvest Units
279	43	30A, 31A, 103
	54	110, 117
280	27	29A, 52
	83	118, 119
281	113	2, 3, 89
	78	11, 78A, 79, 79A
	78	39, 39A
	50	72, 77
Total	528	
Source: Smith, 1994		

Appendix 2

Unit Cards Not Included in the Final EIS

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 4

VCU: 281

Alternative(s): ROD

Photo Information

Year 1986

Flight Line 25

Photo Number 118-119

Legend

	VCU Boundary
	Harvest Unit Boundary
	Setting Boundary
	Adjacent Unit
	Proposed Road
	Contour Interval (100 feet)
	Landing
	Shoreline and Lakes
	Class I and II Stream Buffers
	Class III Stream
	Eagle Tree

Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

IDT Review

A setting is dropped from FEIS Unit 4 for hydrology and fisheries concerns.

M. J. Weber



PROJECT: 115HK

LUD: VCU: 28

UNIT: 4

ACRES: 86

MANAGEMENT AREA:

RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)

RECOMMENDED SYSTEM IS CLEARCUT. NATURAL REGEN. OF HEMLOCK SHOULD BE ADEQUATE. CONSIDER PLANTING UNIT w/ CLEARCUT TO MAINTAIN CURRENT SPECIES COMPOSITION. PLANTING / SITE REGEN. OF S. SPRUCE ALONG MAIN CREEKS FOR ADEQUATE REGEN. MAY BE NECESSARY IF NECESSARY, A. PRE-COMMERCIAL THINNING AT 15-20 YRS. IS RECOMMENDED. THE PRE. DOMINANT PLANT ASSOC. IS WH-YC/BB, WHICH IS MODERATELY PRODUCTIVE. IF POSSIBLE, LEAVE 2 SPACES / AC. FOR DIVERSITY. STEEP PITCHES AND V. ROCKS OCCUR. DIAGONALLY FALL TREES AWAY FROM V. ROCKS.

Stock line should provide adequate suspension for uphill yarding and running skyline for down hill yarding. EXISTING may be required for uphill yarding. Light boundary is cleared where there are slopes.

PROVIDE MINICUT OR WINDFIRM BUFFER ON GLASS F AND II STAGNANTS. SUGGEST KEEPING UNIT OUT OF AIRPARK (WETLAND) AREAS. SPLIT YARDING OVER V. ROCKS IF PRACTICAL. TO REDUCE potential increased erosion in steep incised channels log away from channel & prevent debris & timber from falling into channel. Maintain wetlands in valley floor which are important for base flow in stream (glacier). USE PARTIAL LOG BUFFERING ALONG THE SOUTHERN BOUNDARY. THE FULLY BUFFERING.

Harvest of southern portion of unit (particularly along creek) will result in loss of high quality habitat for moose, other, brown bear. Harvesting entire unit will impact high quality habitat for deer winter range, and will result in fragmentation of winter range.

WOULD NOT MEET VDO ON FOS. VISIBLE FROM SMALL BOATS ON USHIBAY MAY BE

Outside Survey designated high sensitivity area - no survey necessary

LOGGING/TRANSPORTATION

Landing: 4-11-2, 13, 43
Profiles: 7-11-92
Field Review: 7-11-92
WATERSHED/FISHERIES

Field Review: GSR/GWU
6-29-92
7/19/92 DMJ
SOILS/GEOLOGY

Field Review: 6/11/92
OSW & RPL 6/11/92
WILDLIFE/SUBSISTENCE

Field Review: VLA 7/20/92
VISUAL/RECREATION

Perspective Plots:
Field Review: 6/11/92
ARCHAEOLOGICAL/CULTURAL

Field Review: N/A

Tim Type	X	4	4	X	4	5	1	4	4	5	4	6	TOTAL
Acres													
MBF/Species													
WH													
BB													
YC													
MH													
Other													
TOTAL													
MBF/Ag													
Prevalent Plant Assoc.													
Site Index													
Regen Method													
Gross Growth													
N. Goshawk													
Wind Hazard (H,M,L)													
Damage (flood, disease, animal, etc.)													

LOGGING/TRANSPORTATION

Landing: 4-11-2, 13, 43
Profiles: 7-11-92
Field Review: 7-11-92
WATERSHED/FISHERIES

Field Review: GSR/GWU
6-29-92
7/19/92 DMJ
SOILS/GEOLOGY

Field Review: 6/11/92
OSW & RPL 6/11/92
WILDLIFE/SUBSISTENCE

Field Review: VLA 7/20/92
VISUAL/RECREATION

Perspective Plots:
Field Review: 6/11/92
ARCHAEOLOGICAL/CULTURAL

Field Review: N/A

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 4-A

VCU: 281

Alternative(s): ROD

Photo Information

Year: 1986

Flight Line: 25

Photo Number: 118-119

Legend

	VCU Boundary
	Harvest Unit Boundary
	Setting Boundary
	Adjacent Unit
	Proposed Road
	Contour Interval (100 feet)
	Landing
	Shoreline and Lakes
	Class I and II Stream Buffers
	Class III Stream
	Eagle Tree

Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

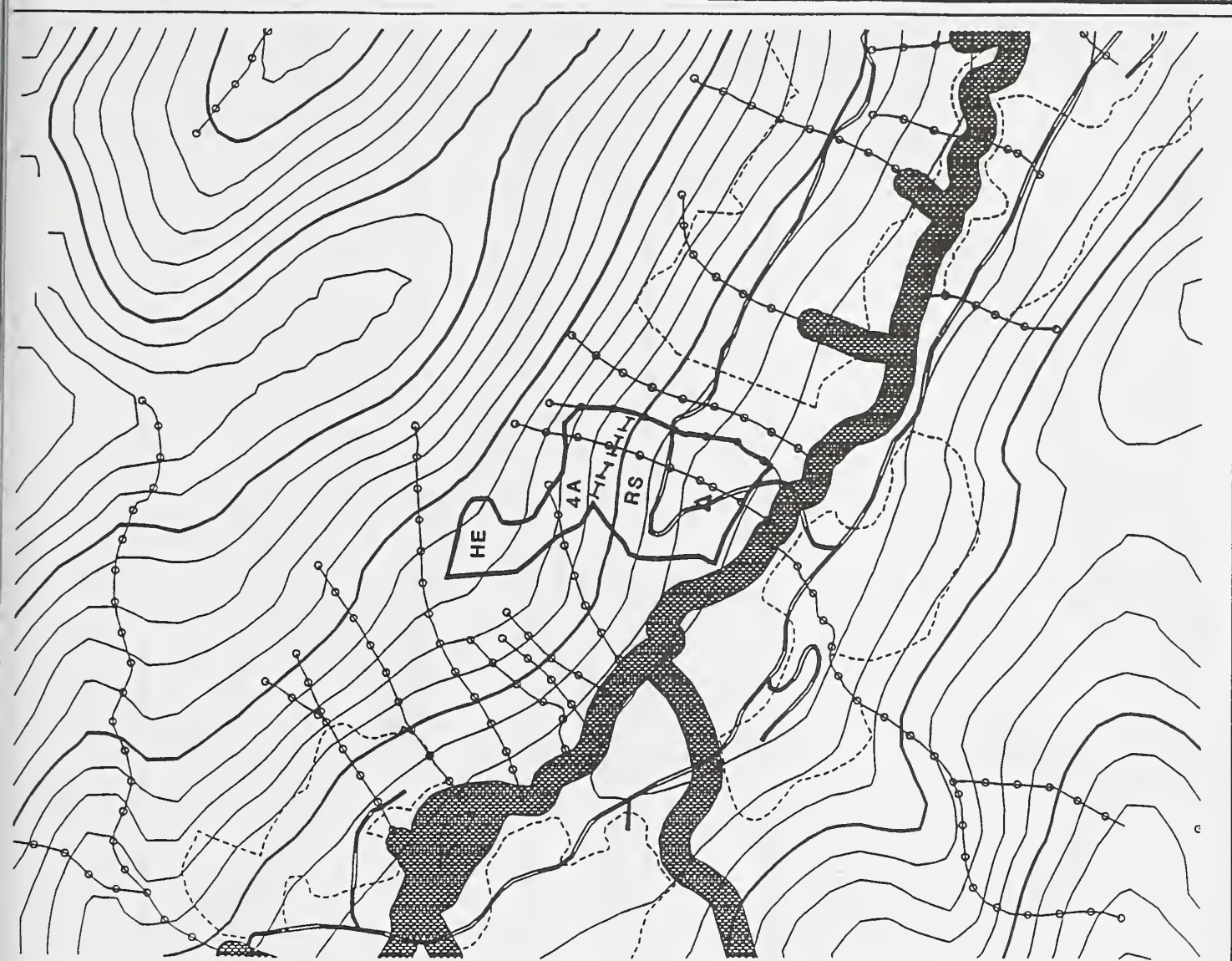
IDT Review

Unit 4A is the western most setting of FEIS Unit 4. This unit is the result of dropping a setting for hydrology and fisheries concerns.

M. J. Weber



Feet



PROJECT: 15HK

MANAGEMENT AREA:

LUD: VCU; 20

UNIT: 4A

ACRES: 23

RESOURCE (Name/Date)

TIMBER/SILVICULTURE

Bland Exam: 6/25/92

T. PARRA, S. ALLEN

Bland Exam Type: PLOTS

Billiculturalist Review:

S. Smith

7/25/92

Tim Type	X 4 4	X 4 5	H 4 4	S 4 6	TOTAL
Acres					
MBF/Species					
WH					
BB					
YC					
MH					
Other					
TOTAL					
MBF/Ag					
Prevalent Plant Assoc.	110	210	210	353	
Site Index					
Forest Method					
Gross Growth					
N. Growth					
Wind Hazard (H.M.I.)	NONE	SEEN			
Damage (Insect, disease, animal, etc.)	H				

LOGGING/TRANSPORTATION

Landing: 4-1, 1-2, 1-3, 4-3

Profiles:

Field Review: 7/11-92

WATERSHED/FISHERIES

Field Review: GSR/GUV

6-29-92

7/3/92 DM/S

SOILS/GEOLOGY

Field Review: 6/1/92

OSW & RRL 6/1/92

WILDLIFE/SUBSISTENCE

Field Review:

VLA 7/20/92

VISUAL/RECREATION

Perspective Photo:

Field Review: 6/1/92

ARCHAEOLOGICAL

CULTURAL

Field Review: N/A

RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)

RECOMMENDED SYSTEM IS CLEARCUT. NATURAL REGEN. OF HERMOC SHOULD BE ADEQUATE. CONSIDER PLANTING UNIT w/ CEDAR TO MAINTAIN CURRENT SPECIES COMPOSITION. PLANTING / SITE REGEN. OF S. SPRUCE ALONG MAIN CREEKS FOR ADEQUATE REGEN. MAY BE NECESSARY. IF NECESSARY, A. PRE-COMMERCIAL THINNING AT 15-20 YRS. IS RECOMMENDED. THE PRE. DOMINANT PLANT ASSOC. IS WH-YC/B3, WHICH IS MODERATELY PRODUCTIVE. IF POSSIBLE, LEAVE 2 SPOTS/AC. FOR DIVERSITY. STEEP PITCHES AND V. NOCHES OCCUR. DIRECTIONALLY FALL TARGET AWAY FROM V. NOCHES.

Stockpile should provide adequate skyline for down hill for uphill yarding and running skyline for uphill yarding. Extensions may be required for uphill yarding. Explicit boundary is altered where terrain slopes 65%.

PROVIDE MINIMUM 100 FT OR WINDFIRM BUFFER ON GLASS LAND STREAMS. CONSIDER WINDFIRM BUFFER ON UP TO SLOPE BREAK. SUGGEST KEEPING UNIT OUT OF AIRPARK (WETLAND) AREAS. SALT MARSHING OVER V. NOCHES IF PRACTICAL. TO CHECK potential increased erosion in steep incised channels log away from channel & prevent debris & timber from falling into channel. The within wetlands in valley floor, which are important for base flow in stream (glaciers).

AVOID SLOPES > 55% WHERE HEAVILY DISSECTED. ATTENDING TO AVOID SLOPES > 65%. AVOID & PROTECT V. NOCHES TO WINDFIRM. AVOID & PROTECT LANDSLIDE & FALLEN CHUTES & TRACES TO WINDFIRM. USE PRACTICE LOG SKIDING ON THE SLOPES. THE FUEL TOWER.

Harvest of southern portion of unit (particularly along creek) will result in loss of high quality habitat for marten, other, brown bear. Harvesting entire unit will impact high quality habitat for deer winter range, and will result in fragmentation of remaining winter range.

WOULD NOT MEET VDO ON FOS.

VISIBLE FROM SMALL BOATS ON USHIB-BOY

MAY BE

Outside

Survey

designated high-sensitivity area - no

necessary

Field Review: N/A

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 8

VCU: 281

Alternative(s): ROD

Photo Information

Year 1986

Flight Line 22

Photo Number 163-164

Legend

VCU Boundary

Harvest Unit Boundary

Setting Boundary

Adjacent Unit

Proposed Road

Contour Interval (100 feet)

Landing

Shoreline and Lakes

Class I and II Stream Buffers

Class III Stream

Eagle Tree

Logging System

RS Running Skyline

SL Slackline

SSL Small Slackline

H Highlead

HE Helicopter

SV Shovel

GR Gravity return

IDT Review

The western most setting of FEIS Unit 8 is dropped as further assurance that the area between Units 8 and 90 and the stream buffer will remain windfirm. Crosshatched area below the road will be feathered (30% of timber removed) to increase windfirmness of remaining trees.

M. J. Weber



Feet



UNIT DESIGN CARD

PROJECT: USHK		MANAGEMENT AREA:		LUD: VCU: 28 UNIT: 8 ACRES: 35 (30 cut)	
RESOURCE (Name/Date)		RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)			
TIMBER/SILVICULTURE Stand Exam: 6/23/92 M. White/K. Seitz. Stand Exam Type: Variable Plots; Fixed Plots Silviculturalist Review: S Smith 7/25/92		Tim Type Acres MBF/Species WH BS YC MH Other TOTAL MBF/Ac Provenant Plant Assoc. Site Index Regeneration Method Gross Growth N. Goshawk Wind Hazard (H.M.I.) Damage (Insect, disease, animal, etc.)	X44 S46	TOTAL MBF/Ac Provenant Plant Assoc. Site Index Regeneration Method Gross Growth N. Goshawk Wind Hazard (H.M.I.) Damage (Insect, disease, animal, etc.)	Recommended clear cut system. Natural regeneration of hemlock should be adequate. Planting of YC may be necessary. A PCT at $\approx 15-20$ yrs to enhance growth. a WH-YC/BS plant Assoc. with YC/BS/sc + MC/BS/sc do occur on the lower slopes. Site productivity is moderate.
LOGGING/TRANSPORTATION		Fish creeks in the northern portion of the unit may require directional logging			
Lending: 8-1, 5-2 Profiles: 8-2-209 8-2-229 Field Review: D. J.		PROVIDE MINIMUM 100' BUFFER OR WINDFIRM BUFFER FOR CLASS I STREAM IN NORTH CORNER OF UNIT. MINIMIZE disturbance of muskeg above using channels due to its importance in storing water maintaining flows in stream. To minimize potential channel erosion, avoid entry of logging debris into steep incised channels and remove debris that falls in.			
WATERSHED/FISHERIES		AVOID SLOPES > 60%. AVOID A FOREST V-NOTCHES TO WINDFIRM. USE PRACTICAL LOG SKIDING V. JACOBS ON SLOPES ABOVE THE VALLEY BOTTOM.			
Field Review: GUN & ON & GSR 6-29-92 7/5/92 DMS/DW		Harvesting northern portion of stand will result in loss of high quality habitat for marten, brown bear, etc. No concerns for deer.			
SOILS/GEOLOGY		MAY NOT MEET VDO. WOULD NOT MEET FOS. MAY BE VIABLE FROM S.M. B. USHK BAY.			
PLS. ERL 7/3/92 Field Review: DSD 7/20/92		VISUAL/RECREATION Field Review: 1/4 7/20/92			
WILDLIFE/SUBSISTENCE		VISUAL/RECREATION Field Review: 1/4 7/20/92			
Perspective Plots: Field Review: 1/4 7/20/92		VISUAL/RECREATION Field Review: 1/4 7/20/92			
ARCHAEOLOGICAL/CULTURAL		VISUAL/RECREATION Field Review: 1/4 7/20/92			
Field Review: N/A		VISUAL/RECREATION Field Review: N/A			

outside Sensitive Area - No Survey Necessary

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 11

VCU: 281

Alternatives: ROD

Photo Information

Year 1986

Flight Line 24

Photo Number 130-131

Legend

	VCU Boundary
	Harvest Unit Boundary
	Setting Boundary
	Adjacent Unit
	Proposed Road
	Contour Interval (100 feet)
	Landing
	Shoreline and Lakes
	Class I and II Stream Buffers
	Class III Stream
	Eagle Tree

Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

IDT Review

The short spur road and corner are deleted from the southeastern portion of FEIS Unit 11 as further assurance that the stream buffer will be windfirm.

M. J. Weber



UNIVERSITY OF MICHIGAN

PROJECT: USHK	MANAGEMENT AREA:	LUD: VCU: 28	UNIT: 11	ACRES: 32																																																																							
RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)																																																																											
TIMBER/SILVICULTURE Stand Exam: 6/9/92 M. White/H. Posina Stand Exam Type: Variable Plot; Fixed Plots Silvicultural Review: L Smith 7/25/92	<table border="1"> <thead> <tr> <th>Time Type</th> <th>X45</th> <th>X44</th> <th>TOT/AVG</th> </tr> </thead> <tbody> <tr><td>Acres</td><td></td><td></td><td></td></tr> <tr><td>MBF/Species</td><td></td><td></td><td></td></tr> <tr><td>WH</td><td></td><td></td><td></td></tr> <tr><td>88</td><td></td><td></td><td></td></tr> <tr><td>YC</td><td></td><td></td><td></td></tr> <tr><td>MH</td><td></td><td></td><td></td></tr> <tr><td>Other</td><td></td><td></td><td></td></tr> <tr><td>TOTAL</td><td></td><td></td><td></td></tr> <tr><td>MBF/Ag</td><td></td><td></td><td></td></tr> <tr><td>Prevalent</td><td></td><td></td><td></td></tr> <tr><td>Plant Assoc.</td><td>120</td><td></td><td></td></tr> <tr><td>Site Index</td><td></td><td></td><td></td></tr> <tr><td>Regen Method</td><td></td><td></td><td></td></tr> <tr><td>Gross Growth</td><td></td><td></td><td></td></tr> <tr><td>H. Growth</td><td>None observed</td><td></td><td></td></tr> <tr><td>Wind Hazard (H.M.I.)</td><td>M</td><td></td><td></td></tr> <tr><td>Damage (Insect, disease, animal, etc.)</td><td></td><td></td><td></td></tr> </tbody> </table>	Time Type	X45	X44	TOT/AVG	Acres				MBF/Species				WH				88				YC				MH				Other				TOTAL				MBF/Ag				Prevalent				Plant Assoc.	120			Site Index				Regen Method				Gross Growth				H. Growth	None observed			Wind Hazard (H.M.I.)	M			Damage (Insect, disease, animal, etc.)				Recommend clear cut system. Natural regen of hemlock should be adequate. Planting of YC may be necessary. A PCT may be necessary to enhance growth in 15-20 yrs. Unit predominantly WH/BS/SF. Site productivity is high.	Mostly downhill yarding. Some moderately severe sidehill. Directional fall yard away from stream buffers. Snag retention is a safety issue.
Time Type	X45	X44	TOT/AVG																																																																								
Acres																																																																											
MBF/Species																																																																											
WH																																																																											
88																																																																											
YC																																																																											
MH																																																																											
Other																																																																											
TOTAL																																																																											
MBF/Ag																																																																											
Prevalent																																																																											
Plant Assoc.	120																																																																										
Site Index																																																																											
Regen Method																																																																											
Gross Growth																																																																											
H. Growth	None observed																																																																										
Wind Hazard (H.M.I.)	M																																																																										
Damage (Insect, disease, animal, etc.)																																																																											
LOGGING/TRANSPORTATION Landing: 11-1-92 Profiles: 11-1-92, 11-2-92 Field Review: PW 6/10/92 WATERSHED/FISHERIES DWS/DW 1-6-92 Field Review:		Log away from water drainage and consider full log suspension on slopes. Prevent debris from entering drainage and cut it out. Remove it. Minimize disturbance to muskrats. Buffers from streams should be 100 feet and wind firm. Maintain 100 ft buffer from class I streams. Water and surrounding																																																																									
SOILS/GEOLOGY Field Review:	AVOID SLOPES OVER 70%. AVOID WINDFIRM STANDS. AVOID CUTTING LOG SUSPENSION YARDING ALONG	& PROTECT V-NOTCHES AND SLIDG CHUTES TO BELOW THE TOES OF FAILURES. USE PARTIAL THE VALLEY BOTTOM.	Harvest of eastern half of unit will result in loss of high quality habitat for martin, otter, brown bear. Harvesting most of unit will impact moderate and high quality deer winter range.																																																																								
WILDLIFE/SUBSISTENCE Field Review: VLA 7/20/92	VGO: <u>PX</u> VAC: <u>Low</u> Visibilty: <u>MH</u> ROG: <u>PRIMITIVE</u> Recreation: <u>BACK-BAY</u> Trell:	VGO: <u>PX</u> VAC: <u>Low</u> Visibilty: <u>MH</u> ROG: <u>PRIMITIVE</u> Recreation: <u>BACK-BAY</u> Trell:	VGO: <u>PX</u> VAC: <u>Low</u> Visibilty: <u>MH</u> ROG: <u>PRIMITIVE</u> Recreation: <u>BACK-BAY</u> Trell:																																																																								
VISUAL/RECREATION Perspective Plots: Field Review: 6/1/92	VGO: <u>PX</u> VAC: <u>Low</u> Visibilty: <u>MH</u> ROG: <u>PRIMITIVE</u> Recreation: <u>BACK-BAY</u> Trell:	VGO: <u>PX</u> VAC: <u>Low</u> Visibilty: <u>MH</u> ROG: <u>PRIMITIVE</u> Recreation: <u>BACK-BAY</u> Trell:	VGO: <u>PX</u> VAC: <u>Low</u> Visibilty: <u>MH</u> ROG: <u>PRIMITIVE</u> Recreation: <u>BACK-BAY</u> Trell:																																																																								
ARCHEOLOGICAL/CULTURAL Field Review: 7-13-92	No significant Cultural Resources found	No significant Cultural Resources found	No significant Cultural Resources found																																																																								

Harvest Unit Design Card
Ushk Bay EIS

Harvest Unit: 12
VCU: 281
Alternative(s): ROD
Photo Information
Year 1986
Flight Line 23
Photo Number 14-15

Legend

- VCU Boundary
- Harvest Unit Boundary
- Setting Boundary
- Adjacent Unit
- Proposed Road
- Contour Interval (100 feet)
- Landing
- Shoreline and Lakes
- Class I and II Stream Buffers
- Class III Stream
- Eagle Tree

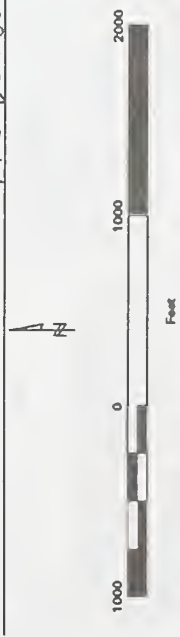
Logging System

- RS Running Skyline
- SL Slackline
- SSL Small Slackline
- H Highlead
- HE Helicopter
- SV Shovel
- GR Gravity return

IDT Review

The western boundary of FEIS Unit 12 is drawn back as further assurance that the boundary will be windfirm and for soils and hydrology concerns with the recent slide to the west of the unit.

M.J. Weber



UNIT DESIGN CARD

PROJECT: USRA		MANAGEMENT AREA:		LUD:	VCU: 281	UNIT: 12	ACRES: 22
RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)							
TIMBER/SILVICULTURE		<p>Recommended cutting system is clearcut. Natural regeneration of hemlock should be adequate. A pre-commercial thin at 15-20 years will probably be necessary for growth enhancement.</p> <p>Predominant plant association is WH/BB/SF, which is highly productive. Unit is defined by steep notches which form a V. Consult with geologist about possible limitation of upper portion (arms) adjacent to notch. Steep slopes, shallow rocky soils and prevailing winds should be noted. Old blow down extant.</p>					
<p>Stand Exam: 6/11/92</p> <p>S. Allen / K. Seitz</p> <p>Stand Exam Type: plots</p> <p>Silviculturalist Review: S. Smith</p> <p>7/25/92</p>		<p>Recommended cutting system is clearcut. Natural regeneration of hemlock should be adequate. A pre-commercial thin at 15-20 years will probably be necessary for growth enhancement.</p> <p>Predominant plant association is WH/BB/SF, which is highly productive. Unit is defined by steep notches which form a V. Consult with geologist about possible limitation of upper portion (arms) adjacent to notch. Steep slopes, shallow rocky soils and prevailing winds should be noted. Old blow down extant.</p>					
LOGGING/TRANSPORTATION		<p>Harvest away from 2 main drains. Unit upper slopes over 65% steep Steep retention as a safety issue. See revised boundary.</p>					
<p>Landing: 12-1, 12-2, 12-3</p> <p>Profile:</p> <p>Field Review: 8/22 7-25-92</p> <p>WATERSHED/FISHERIES</p> <p>DNB (NSW) 7-6-92</p> <p>Field Review: 00~ 8/2/92</p>		<p>Log away from V-notch drainages and consider full log suspension. Protect debris from entering drainages and if it does remove it. Minimize disturbance to muskrats. Buffer from streams should be 100 feet and wind firm. Maintain 100' buffer for class I streams. Recommend 50' buffer on class II streams posing siltation problems, BUT ONLY IF WINDFIRM.</p>					
SOILS/GEOLOGY		<p>Avoid slopes over 65% Avoid the steep slopes, frequent dissections. Avoid cutting below the toes of failures on the W boundary of the unit. Harvest of NW portion of unit will result in loss of high quality habitat for brown bear & other. Harvesting entire unit will result in loss of high quality habitat for marten. Harvesting SE tip of unit will impact moderate quality deer winter range.</p>					
<p>Field Review: 05W 3/22 6/1/92</p> <p>WILDLIFE/SUBSISTENCE</p> <p>Field Review: VLA 7/20/92</p>		<p>Harvest of NW portion of unit will result in loss of high quality habitat for brown bear & other. Harvesting entire unit will result in loss of high quality habitat for marten. Harvesting SE tip of unit will impact moderate quality deer winter range.</p>					
VISUAL/RECREATION		<p>Would not meet pos. May be seen by boats on Lake Fry.</p>					
<p>Perspective Plots:</p> <p>Field Review: 6/24 7-24-92</p>		<p>Would not meet pos. May be seen by boats on Lake Fry.</p>					
ARCHAEOLOGICAL/CULTURAL		<p>No significant cultural resources found</p>					
<p>W. Skopec 7-18-92</p> <p>Field Review:</p>		<p>No significant cultural resources found</p>					

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 27

VCU: 279

Alternative(s): ROD











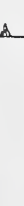
Photo Information

Year 1986

Flight Line 26

Photo Number 12

Legend

-  VCU Boundary
-  Harvest Unit Boundary
-  Setting Boundary
-  Adjacent Unit
-  Proposed Road
-  Contour Interval (100 feet)
-  Landing
-  Shoreline and Lakes
-  Class I and II Stream Buffers
-  Class III Stream
-  Eagle Tree

Logging System

- | | | | |
|-----|-----------------|----|----------------|
| RS | Running Skyline | HE | Helicopter |
| SL | Slackline | SV | Shovel |
| SSL | Small Slackline | GR | Gravity return |
| H | Highlead | | |

IDT Review

Northern boundary of FEIS Unit 27 is adjusted for fisheries concerns.

M. J. Weber



Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 28
VCU: 280
Alternative(s): ROD

Photo Information

Year 1986
Flight Line 25
Photo Number 109-110

Legend

- VCU Boundary
- Harvest Unit Boundary
- - - Setting Boundary
- - - Adjacent Unit
- Proposed Road
- ... Contour Interval (100 feet)
- Δ ○ Landing
- Shoreline and Lakes
- Class I and II Stream Buffers
- Class III Stream
- Eagle Tree

Logging System

- RS Running Skyline
- SL Slackline
- SSL Small Slackline
- H Highlead
- HE Helicopter
- SV Shovel
- GR Gravity return

IDT Review

"Finger" in NW of FEIS Unit 28 is dropped for fisheries concerns.

M.J. Weber



UNIT DESIGN CARD

PROJECT: USHK MANAGEMENT AREA: LUD: VCU: 280 UNIT: 28 ACRES: 27

RESOURCE (Name/Date) RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)

Tim Type	A-44	TOTAL
Acres	39	
MBF/Species		
WH		
88		
YC		
MH		
Other		
TOTAL		
MBF/AC		
Prevalent	210	
Plant Assoc.		
Site Index		
Regen Method		
Gross Growth		
N. Goshawk	NONE	OBSERVED
Wind Hazard (H,M,L)	L	
Damage (Insect, disease, animal, etc.)	SOME FLUTING & DEAD TOPS	

RECOMMEND CLEAR-CUT. NATURAL REGENERATION OF HEHLOCK SHOULD BE ADEQUATE. PLANTING OF YELLOW CEDAR MAY BE NECESSARY TO MAINTAIN SPECIES COMPOSITION.
 WH/YC/BB PLANT ASSOC. ALSO MC/BB AND MC/BB/SC ARE FREQUENT.
 SITE PRODUCTIVITY IS MODERATE. HELICOPTER LOGGING MAY BE NECESSARY DUE TO MANY SHALLOW, BOGGY RAVINES.

Shedline portion has anchors for 1-1/2" tower only. Helicopter portion where no lift exists for skyline, to 24-1 directionally fall away from V-notches. Split yarding away from V-notches generally not feasible. Shed retention is safety issue.
 Class 1 in along western boundary, Class II/III in eastern area of unit. Maintain 100 ft. buffer for Class III streams & 50 ft. buffer or up to slope break on all streams. Split yarding recommended for all V-notches. Split Log away from V-notch channel and consider full on partial suspension. Keep logs from entering channels and if it does get in, remove it.
 FREQUENT DISSECTIONS AND FAILURES. AVOID AND PROTECT V-NOTCHES, SLUMPS, AND CHUTES TO WIND-FIRM STANDS. AVOID CUTTING ABOVE THE HEADS AND BELOW THE TOES OF UNSTABLE GROUND. AVOID CUTTING ABOVE THE SHOULDERS OF THE RAVINES ON THE E & W BOUNDARIES. USE PARTIAL LOGS SUSPENSION YARDING AT THE LEAST ON THE HILLSIDE.
 No concerns for brown bears, martens, river otter, or deer.

WIND NOT MEET POS. MAY BE VISIBLE FROM AIRCRAFT IN MIDDLE-GROUND DISTANCE ZONES.

Outside Sensitive Area - No Survey Necessary

LOGGING/TRANSPORTATION

Landing: 28-1, 24-1
 Profiles: 25-1-5
 Field Review: 7/17/92
 WATERSHED/FISHERIES
 7/4/92 - 1/27

Field Review: 7/6/92
 DMB/BSW

SOILS/GEOLOGY

Field Review: 7/17/92
 DLS & DSW

WILDLIFE/SUBSISTENCE

Field Review: 8/20/92
 VLA

VISUAL/RECREATION

Perspective Plots:
 Field Review: 11/14 7-21-92

ARCHAEOLOGICAL/CULTURAL

Field Review: N/A

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 29
VCU: 280
Alternative(s): ROD

Photo Information

Year: 1986
Flight Line: 25
Photo Number: 109-110

Legend

- VCU Boundary
- Harvest Unit Boundary
- - - Setting Boundary
- - - Adjacent Unit
- Proposed Road
- ... Contour Interval (100 feet)
- ▲ ○ Landing
- Shoreline and Lakes
- Class I and II Stream Buffers
- Class III Stream
- Eagle Tree

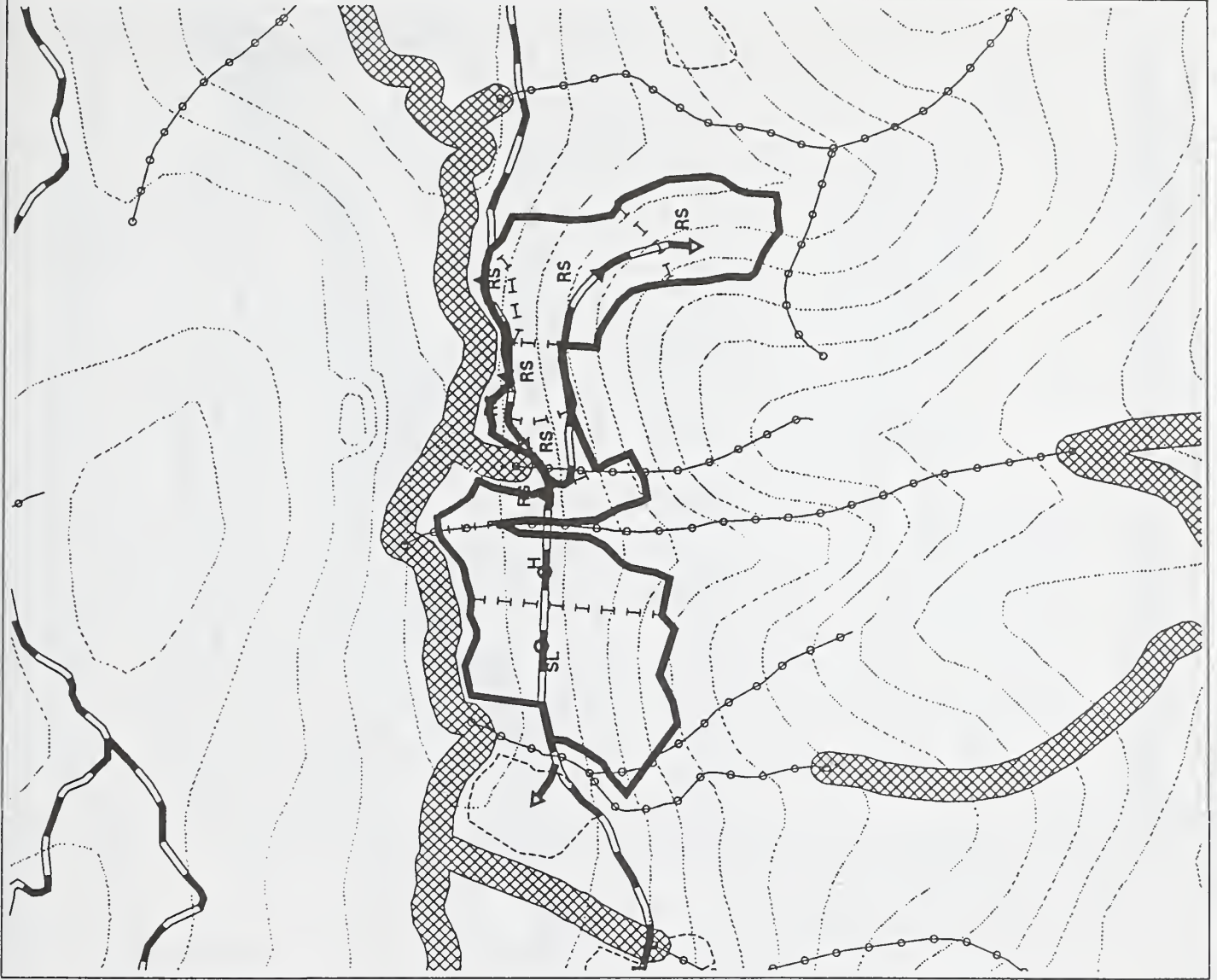
Logging System

- RS Running Skyline
- SL Slackline
- SSL Small Slackline
- H Highlead
- HE Helicopter
- SV Shovel
- GR Gravity return

IDT Review

North central boundary of FEIS Unit 29 is adjusted for fisheries concerns.

M.J. Weber



UNIT DESIGN CARD

[illegible]

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 30
VCU: 279
Alternative(s): ROD

Photo Information

Year 1986
Flight Line 26
Photo Number 13-14

Legend

- VCU Boundary
- Harvest Unit Boundary
- - - Setting Boundary
- - - Adjacent Unit
- == Proposed Road
- ... Contour Interval (100 feet)
- Δ ○ Landing
- ▨ Shoreline and Lakes
- ▩ Class I and II Stream Buffers
- Class III Stream
- ▲ Eagle Tree

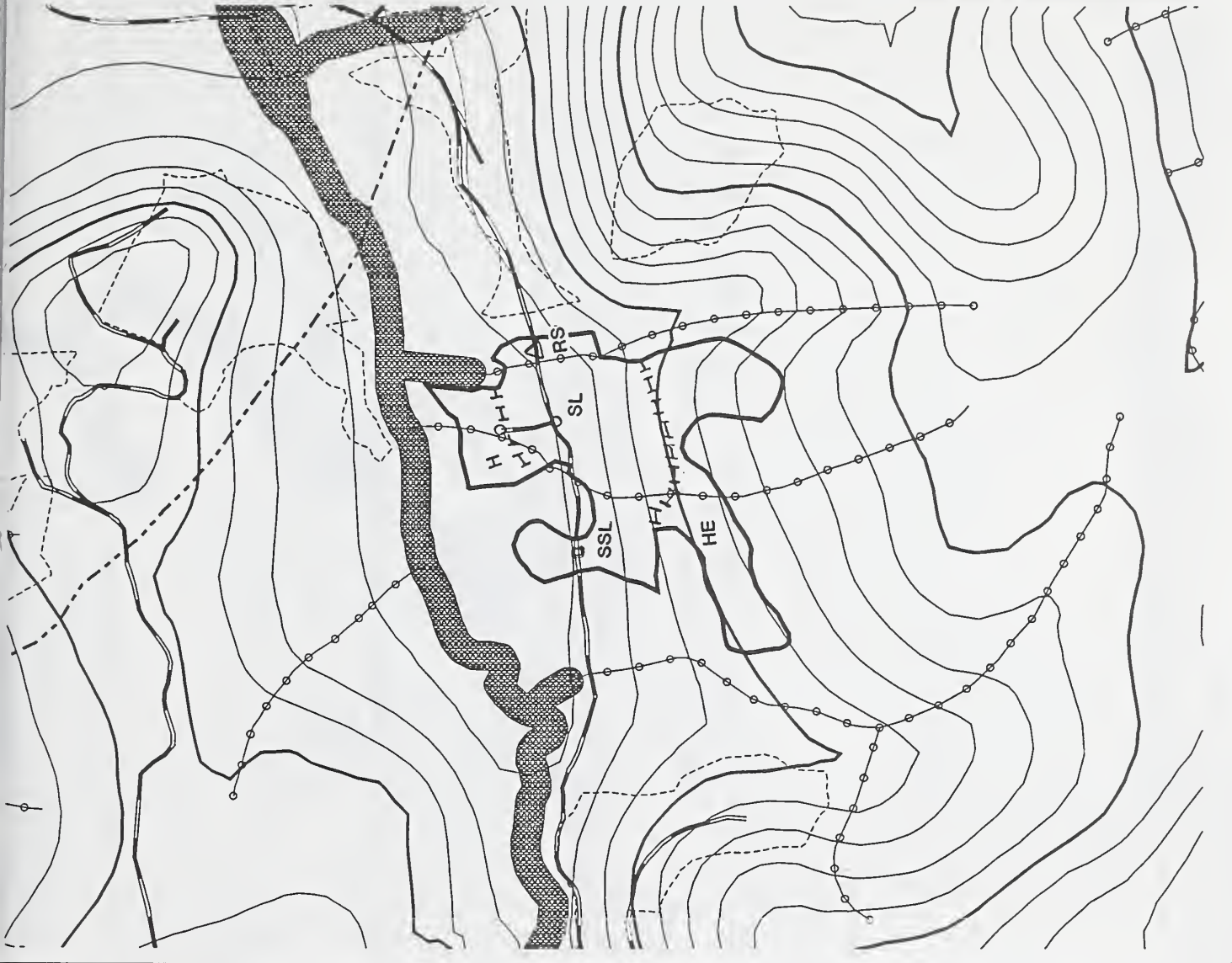
Logging System

- | | | | |
|-----|-----------------|----|----------------|
| RS | Running Skyline | HE | Helicopter |
| SL | Slackline | SV | Shovel |
| SSL | Small Slackline | GR | Gravity return |
| H | Highlead | | |

IDT Review

An area in the center of FEIS Unit 30 is dropped for fisheries concerns. NW boundary of the unit is adjusted for the same reason.

M. J. Weber



ACRES: 60.

RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)

Recommend Clear-cut System. Natural Regeneration of Hemlock should be adequate. Planting of Red Cedar may be necessary to maintain species composition. Present management thinning of 15 to 20 yrs one to remove growth may be necessary. Predominately a WH/VC/BB plant community. Site is moderately productive.

Since retirement is a safety issue. Directly or indirectly

class I & II suffice. Class III suffices if not practical.

Two class 1/11 streams, north & east. Also note slow L
ditch in north (Class 1), maintain 100 ft buffer on class 1/11 stream. Keep
streams, ~~and~~ ^{road} away from V notches. Keep
debbs out of V notches & channels. Recommend not logging in slough dead timber
riparian, an integrity in class 1 stream & slough (class 1). Log of day from V-notch
renewal before V-notch 5 m.

drift in north (Class 1). Maintain 100 ft buffer on class 1 & 11 streams, sloughs, ~~ponds~~ & wetlands. Gradually farm V notches keep debris out of V notches. Recommend not logging in slough & 2nd. Riparian integrity in class 1 stream & sloughs (class 1). If log away from V-notch & remove debris V-notch 5 ft.

elements out of windows : steamship ; newliners not logging in slow down
rip, an integrity in cross stream ; slough ; log of day from V-belt
newware debarre Fit = 5 M.

PROTECT V-NOTES, SLIDES, AND CITATIONS TO VINDICATE

across the series of deep observations near the
comes in SW group of the unit avoid

below THE TOPS of 4 VALUES USE PARTIAL LOGS

Harvesting ^{portion} of unit would result in loss of high

quality habitat for brown bear, river other, and moderate quality habitat for deer.

11-2007 2007/11

WOULD NOT MEET POS. MAY BE VISIBLE FROM POISON COVE. UPPER PORTIN

[illegible]

Wells - High - Sensitivity Area - 110 Wells (sewers)

Cambridge

Harvest Unit Design Card
Ushk Bay EIS

Harvest Unit: 30A
VCU: 279
Alternative(s): ROD
Photo Information
Year 1986
Flight Line 26
Photo Number 13-14

Legend

- VCU Boundary
- Harvest Unit Boundary
- - - - - Setting Boundary
- - - - - Adjacent Unit
- ▬ Proposed Road
- Contour Interval (100 feet)
- Δ ○ Landing
- ▨ Shoreline and Lakes
- ▤ Class I and II Stream Buffers
- Class III Stream
- ▲ Eagle Tree

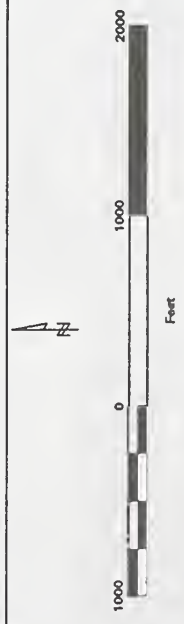
Logging System

- | | | | |
|-----|-----------------|----|----------------|
| RS | Running Skyline | HE | Helicopter |
| SL | Slackline | SV | Shovel |
| SSL | Small Slackline | GR | Gravity return |
| H | Highlead | | |

IDT Review

NW boundary of FEIS Unit 30A is adjusted for fisheries concerns.

M.J. Weber



PROJECT:		USHK	MANAGEMENT AREA:			LUD:	VCU:	UNIT: 30-A	ACRES: 20																																																																		
RESOURCE (Name/Date)		RESOURCE CONCERNS: (INCLUDING MGT. OBJECTIVES & MITIGATION)																																																																									
TIMBER/SILVICULTURE Stand Exam: K. Seitz, M. White 7/10/92 Stand Exam Type: Plots Silvicultural Review: J. Smith 7/25/92		<table border="1"> <thead> <tr> <th>Tim Type</th> <th>4-4-4</th> <th>5-4-6</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>Acres</td> <td>83</td> <td>5</td> <td></td> </tr> <tr> <td>MBF/Species</td> <td></td> <td></td> <td></td> </tr> <tr> <td>WH</td> <td></td> <td></td> <td></td> </tr> <tr> <td>SB</td> <td></td> <td></td> <td></td> </tr> <tr> <td>YC</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MH</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other</td> <td></td> <td></td> <td></td> </tr> <tr> <td>TOTAL</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MBF/Ac</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Prevalent Plant Assoc.</td> <td>21D</td> <td></td> <td></td> </tr> <tr> <td>Site Index</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Regen Method</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Gross Growth</td> <td></td> <td></td> <td></td> </tr> <tr> <td>N. Goshawk</td> <td>None</td> <td>Observed</td> <td></td> </tr> <tr> <td>Wind Hazard (H, M, L, M)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Damage (Insect, disease, animal, etc.)</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	Tim Type	4-4-4	5-4-6	TOTAL	Acres	83	5		MBF/Species				WH				SB				YC				MH				Other				TOTAL				MBF/Ac				Prevalent Plant Assoc.	21D			Site Index				Regen Method				Gross Growth				N. Goshawk	None	Observed		Wind Hazard (H, M, L, M)				Damage (Insect, disease, animal, etc.)				Recommend Clear-cut System. Natural Regeneration of Hemlock should be adequate. Planting of Yellow Cedar may be necessary to maintain species composition. A precommercial thinning at 15 to 20 yrs age to enhance growth may be necessary. Predominately a WH/YC/SB Plant Association, Site is moderately productive.				
Tim Type	4-4-4	5-4-6	TOTAL																																																																								
Acres	83	5																																																																									
MBF/Species																																																																											
WH																																																																											
SB																																																																											
YC																																																																											
MH																																																																											
Other																																																																											
TOTAL																																																																											
MBF/Ac																																																																											
Prevalent Plant Assoc.	21D																																																																										
Site Index																																																																											
Regen Method																																																																											
Gross Growth																																																																											
N. Goshawk	None	Observed																																																																									
Wind Hazard (H, M, L, M)																																																																											
Damage (Insect, disease, animal, etc.)																																																																											
LOGGING/TRANSPORTATION Landing: 30-1, 2, 3, 4, 5 Profiles: 30-2, 3, 4, 5 Field Review: Dec 7/1/92 WATERSHED/FISHERIES 7/4/92 et al Field Review: DMB 7/6/92		snag retention is a safety issue. Directionally fall away from Class I & II buffers. Class III buffer is not practical. Two class 1/11 streams, north & east, one class 1/11 in east. Also note sloughs in north (Class 1). Maintain 100 ft buffer on class 1/11 streams. Sloughs, beaches ^{land away from V notches, keep debris out of V notches & channels. Recommend not logging in slough beds. Maintain riparian integrity in class 1 streams & sloughs. Class 1. 1/11 logging away from V notches & remove debris N/A-gals in.}																																																																									
SOILS/GEOLOGY Field Review: DSW 7/24 92 WILDLIFE/SUBSISTENCE Field Review: VLA 7/20/92		AVOID SLOPES OVER 65%. AVOID & PROTECT V-NOTCHES, SLIDES, AND CUTS TO WINDFIRM STANDS. AVOID CUTTING AND JAGGING ACROSS THE SERIES OF DEEP DISSECTIONS NEAR THE SE INSIDE CORNER OF THE UNIT, AND ACROSS THE SW CORNER OF THE UNIT. AVOID CUTTING ABOVE THE HEADS AND BELOW THE TOES OF FAULTS. USE PARTIAL LOG SUSPENSION YARDING ON THE HILLSIDE. Harvesting No position of unit would result in loss of high quality habitat for brown bear, river otter, and moderate quality habitat for deer.																																																																									
VISUAL/RECREATION Perspective Plots: Field Review: 6/18 7/26/92		VAO: VAC: Visibility: ROC: Recreation Bldg: Trail:	RETENTION / FR LOW / SM. INTERM. SECTION MIDDLE FOUND PRIMITIVE I B*																																																																								
ARCHAEOLOGICAL/CULTURAL Field Review: N/A		Outside high-sensitivity Area - no cultural resources survey required Would not meet POS. May be visible from poison Cove. (Other portion)																																																																									

Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 30B
VCU: 279
Alternative(s): ROD

Photo Information

Year: 1986
Flight Line: 26
Photo Number: 13-14

Legend

- VCU Boundary
- Harvest Unit Boundary
- - - Setting Boundary
- - - Adjacent Unit
- Proposed Road
- ... Contour Interval (100 feet)
- ▲ ○ Landing
- ▨ Shoreline and Lakes
- ▩ Class I and II Stream Buffers
- Class III Stream
- ▲ Eagle Tree

Logging System

- | | | | |
|-----|-----------------|----|----------------|
| RS | Running Skyline | HE | Helicopter |
| SL | Slackline | SV | Shovel |
| SSL | Small Slackline | GR | Gravity return |
| H | Highlead | | |

IDT Review

Unit 30B is the eastern part of FEIS Unit 30. This unit is the result of dropping an area for fisheries concerns. NE boundary of unit 30B is likewise adjusted.

M. J. Weber



PROJECT:		USHK		MANAGEMENT AREA:		LUD:	VCU:	UNIT: 30-2	ACRES: 19	
RESOURCE (Name/Date)		RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)								
Stand Exam: K. Seitz, M. White 7/10/92 Stand Exam Type: Plots Silviculturalist Review: J. Smith 7/25/92		Tim Type	X-4-4	S-4-6		TOT/AVG	Recommend Clear-cut System. Natural Regeneration of Hemlock Should be adequate. Planting of Yellow Cedar may be necessary to maintain species composition. A precommercial thinning at 15 to 20 yrs age to enhance growth may be necessary. Predominately a WH/VC/BB Plant Association, site is moderately productive.			
		Acres	83	5						
		MBF/Species								
		WH								
		BB								
		YC								
		MH								
		Other								
		TOTAL								
		MBF/AC								
		Plant Assoc.								
		Site Index				210				
		Regen Method								
		Gross Growth								
		N. Goshawk				None Observed				
		Wind Hazard (H, M, L, M)								
		Damage (insect, disease, animal, etc.)								
LOGGING/TRANSPORTATION		snag retention is a safety issue. Directionally fall gray fir class I & II buffers. Class III buffer is not practical.								
Landing: 30-1, 2, 3, 4, 5 Profile: 30-2-250 Field Review: J. Smith 7/10/92 WATERSHED/FISHERIES 7/14/92 elak Field Review: DMB 7/16/92		Two class I/II streams, north & east, one class III in east. Also note slough area in north (class I). Maintain 100 ft buffer on class I & II streams, sloughs, and ^{Yard away from V notches, keep debris out of V notches & channels. Recommend not logging in slough area. Maintain riparian integrity in class I stream & slough & class I. If logging away from V notches & remove debris at 100 ft.}								
SOILS/GEOLOGY		PROTECT V-NOTCHES, SLIDES, AND CUTS TO WINDFIRM STANDS. AVOID CUTTING AND YARDING ACROSS THE SERIES OF DEEP DISSECTIONS NEAR THE SE INSIDE CORNER OF THE UNIT, AND ACROSS THE SW CORNER OF THE UNIT. AVOID CUTTING ABOVE THE HEADS AND BELOW THE TOES OF FAULTS. USE PARTIAL LOG SUSPENSION YARDING ON THE HILLSIDE.								
Field Review: VLA 7/20/92		Harvesting North of unit would result in loss of high quality habitat for brown bear, river otter, and moderate quality habitat for deer.								
VISUAL/RECREATION		WOULD NOT MEET POS. MAY BE VISIBLE FROM POISON COVE. (OPEN PORTION)								
Perspective Plots: Field Review: 6/18 7/29/92		VAO: RETENTION / PP- VAC: LOW / SM. INTERM. SEASON Visibility: MIDDLE / POUND ROC: PRIMITIVE I Recreation Site: PP Trail:								
ARCHAEOLOGICAL/CULTURAL		Outside high-sensitivity area - no cultural resources survey required								
Field Review: N/A										

Harvest Unit Design Card
Ushk Bay EIS

Harvest Unit: 31
VCU: 279
Alternative(s): ROD
Photo Information
Year 1986
Flight Line 16
Photo Number 11-12

Legend

- VCU Boundary
- Harvest Unit Boundary
- - - Setting Boundary
- - - Adjacent Unit
- Proposed Road
- Contour Interval (100 feet)
- Δ ○ Landing
- ▨ Shoreline and Lakes
- ▩ Class I and II Stream Buffers
- Class III Stream
- ▲ Eagle Tree

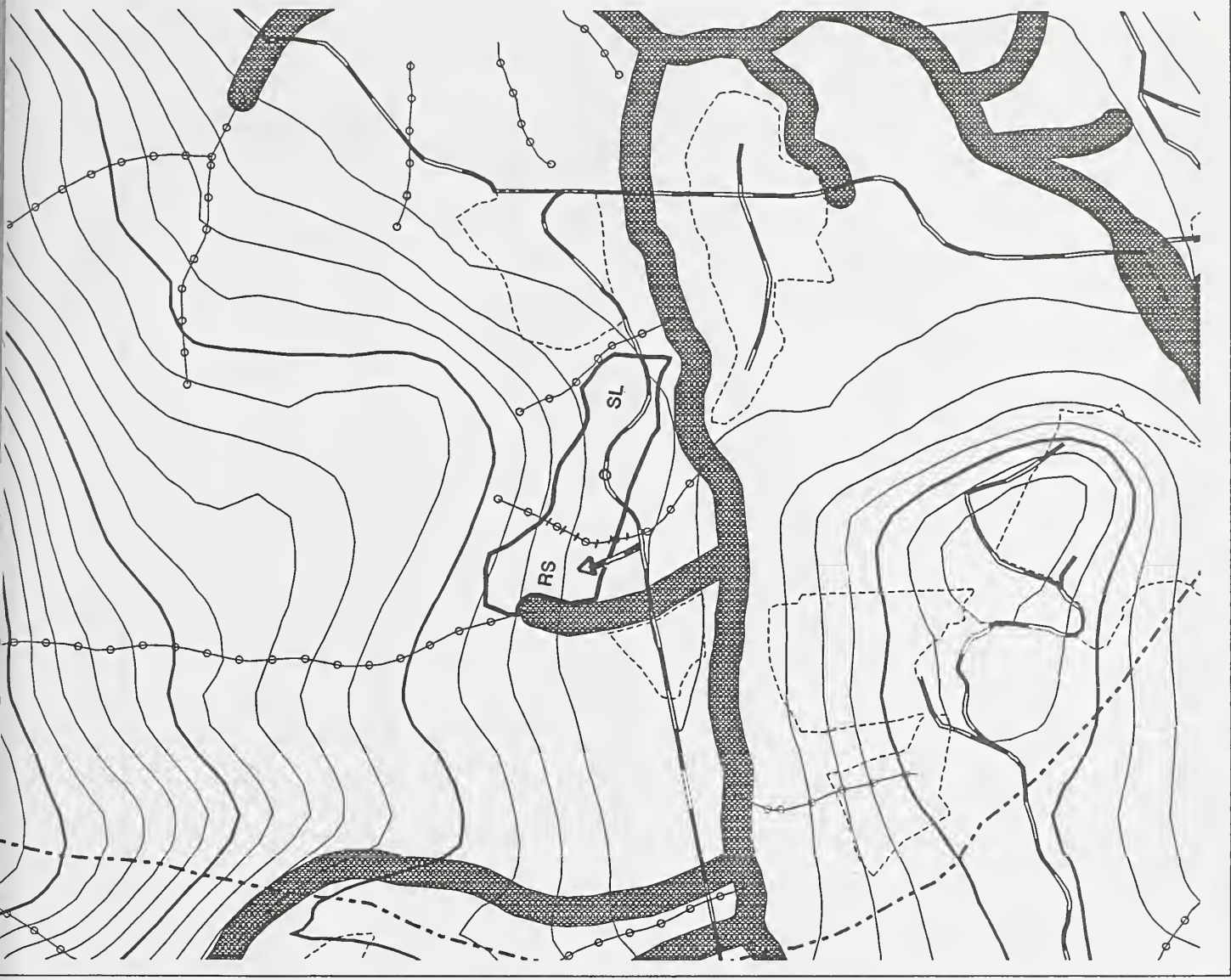
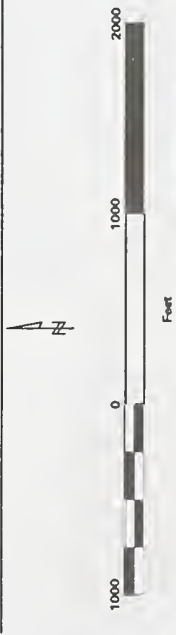
Logging System

- | | | | |
|-----|-----------------|----|----------------|
| RS | Running Skyline | HE | Helicopter |
| SL | Slackline | SV | Shovel |
| SSL | Small Slackline | GR | Gravity return |
| H | Highlead | | |

IDT Review

South boundary of FEIS Unit 31 is adjusted for fisheries concerns.

M. J. Weber



UNIT DESIGN CARD

PROJECT: USHR MANAGEMENT AREA: LUD: VCU: 279 UNIT: 31 ACRES: 22

RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)

TIMBER/SILVICULTURE
 Bland Exam: T. Puskar, S. Allen 7/11/92
 Bland Exam Type: Pests
 Silvicultural Review: S. Smith 7/25/92

RECOMMENDED CUTTING METHOD IS CLEARCUT. NATURAL REGENERATION OF HEMLOCK SHOULD BE SUFFICIENT. PLANTING OF SITKA SPRUCE + K. CEDAR FOR REGEN. MAY BE NECESSARY TO MAINTAIN CURRENT SPECIES COMPOSITION. IF POSSIBLE, LEAVE TWO SNAGS/ACRE FOR DIVERSITY. A PRE-COMMERCIAL THINNING AT 15-20 YRS. IS RECOMMENDED TO ENHANCE/INCREASE GROWTH. LOWER PORTION OF UNIT IS FAIRLY PRODUCTIVE ALTHOUGH THERE ARE PATCHES OF RED ALDER. THE PREVALENT PLANT ASSOCIATION IS WH-YC/SS WHICH IS MODERATELY PRODUCTIVE.

UNIT BOUNDARY CHANGES: UPPER PORTION OF UNIT IS VERY STEEP (SLOPES 80%+) WITH V-PORCHES. THIS MAY REDUCE UPPER BOUNDARY TO BE LOWERED. Additional ~1200 added in SW corner.

LOGGING/TRANSPORTATION
 Logging System: Running skyline
 Landings (# of Sellings): 3

WATERSHED/FISHERIES
 Field Review: 6/20/92
 PL: 7-11-92

SOILS/GEOLOGY
 Field Review: OSW & QLS 7/17/92

WILDLIFE/SUBSISTENCE
 Field Review: VLA 7/20/92

VISUAL/RECREATION
 Perspective Plots:
 Field Review: 6/18 7-20-92

ARCHAEOLOGICAL/CULTURAL
 Field Review: M. Kelly 7-15-92

Upper boundary altered where boundary intersects logging this unit.
 Two class 1 stream (South, South West). Maintain 100 ft buffer. There class 1 stream (East, West Center). Maintain 50 ft or up to slope break buffer, if recommended split grading. Log cutting from V-PORCHES. Consider full base suspension minimize disturbance of muskrats and riparian wetlands. Stream should be a minimum of 100 feet wide and be wind firm.

Logging suspension of unit would result in loss of high quality habitat for brown bears, river otter. Logging northern half of unit will impact moderate quality deer winter range.

WOULD NOT MEET POS. VISIBLE FROM POISON COVE.

No significant cultural resources

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 35
VCU: 280
Alternative(s): ROD

Photo Information

Year: 1986
Flight Line: 25
Photo Number: 111

Legend

- VCU Boundary
- Harvest Unit Boundary
- - - Setting Boundary
- - - Adjacent Unit
- Proposed Road
- Contour Interval (100 feet)
- Δ ○ Landing
- Shoreline and Lakes
- Class I and II Stream Buffers
- Class III Stream
- Eagle Tree

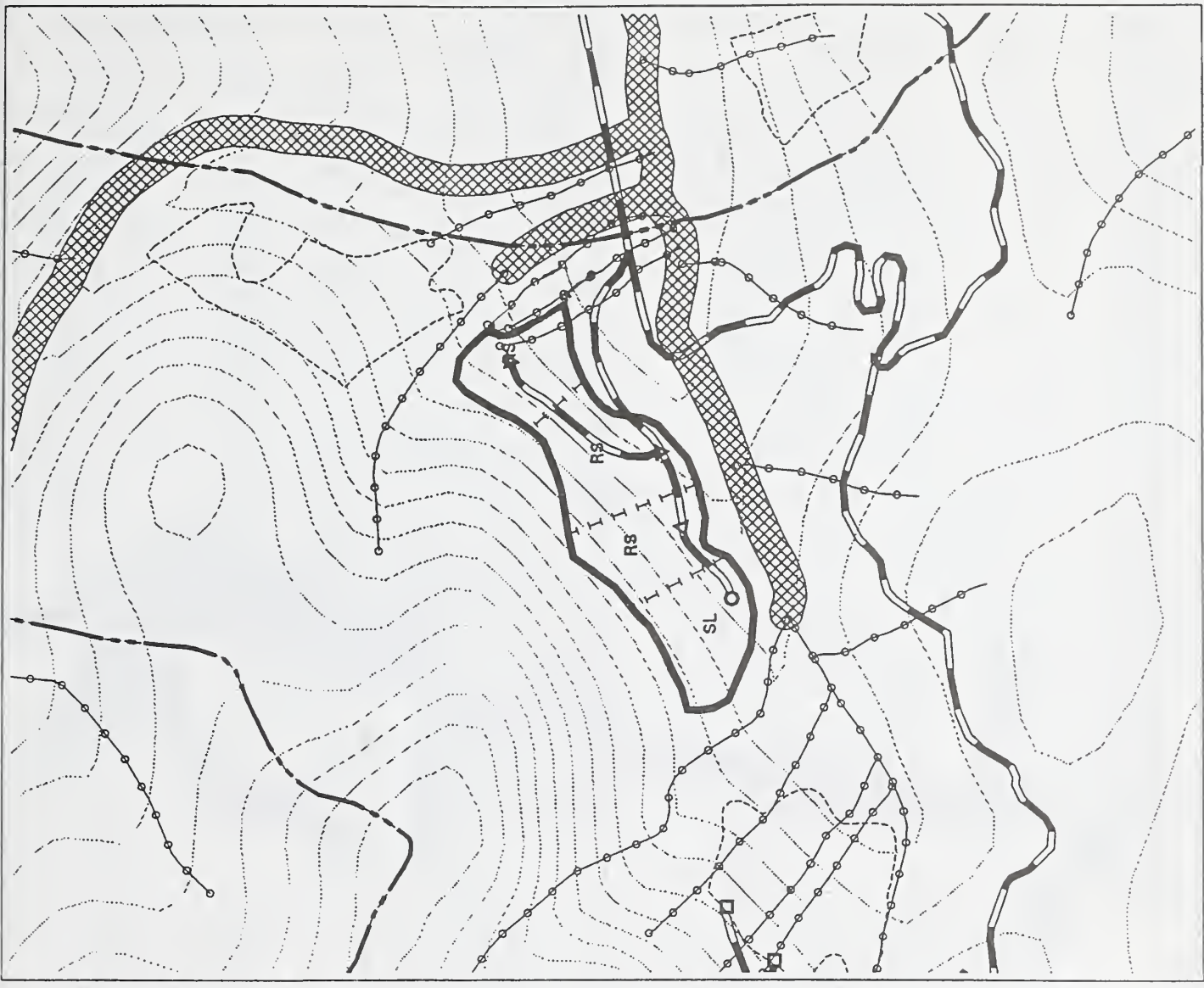
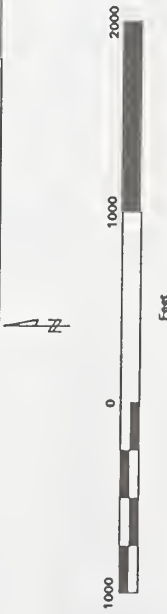
Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highead		

IDT Review

SE boundary of FEIS Unit 35 is adjusted for fisheries concerns.

M.J. Weber



UNIT DESIGN CARD

PROJECT: IISHK		MANAGEMENT AREA:		LUD: VCU: 2.80	UNIT: 35	ACRES: 40
RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)						
Cutting method recommended is clear-cut. Natural regeneration of hemlock should be adequate. Upland spruce stand occurs as well as yellow cedar in areas - planting may be necessary to maintain current species composition. Thinning at 15-20 years recommended.						
Prevalent plant association is WH/BB, a moderately productive site; also WH/BB/SF (very productive site), WH-VL/BB and SS/LC. Steep, rock-faced drainages characterize the upper (N) portion of unit, also brush fields. Slopes are 85% in upper portion of unit with pitches of 100%. Large boulders were common and a rock slide observed.						
POSSIBLE UNIT BOUNDARY CHANGES -- consult geologist.						
No logging difficulties. Unit boundary altered where terrain slopes changed 1/50%						
One class 1 stream along southern boundary, maintain 100ft buffer. Many class 3 streams in unit, split yard if practical. Directionally log away from class 1 streams. Log away from stream drainage. Consider full log suspension. Minimize disturbance by mechanical and manual methods. Protect stream bank with brush and it may be necessary to remove stream bank at 100 feet and wind farm.						
PROTECT V-NOTCHES, SLIDES, AND CUTS TO WINDFIRM TOES OF FAULTURES. AVOID THE PAIR OF CUTS NEAR THE PENSION YARDING ALONG THE VALLEY BOTTOM.						
Logging Southern portion of unit will result in loss of high quality habitat for brown bear, river otter. Logging western half of unit will result in loss of moderate quality deer winter range.						
MAY BE VISIBLE FROM POISON CAVE - WOULD NOT MEET FOS.						
Outside Sensitive Area - No Survey Necessary						

TIME TYPE	AREA	X44	TOTAL
MBF/Species			
WH			
BB			
YC			
MH			
Other			
TOTAL			
MBF/AC			
Prevalent Plant Assoc.		110	
Site Index			
Regen Method			
Gross Growth			
N. Goshawk		none seen	
Wind Hazard (H,M,L)		M	
Damage (Insect, disease, animal, etc.)			
HEMLOCK FLUTING			
Logging System: Running skyline			
Landings (# of Bellings): 4			
Class 1 or 2 Channel? Number: 1			
Class 3 Channels In Unit? Y Number: many			
AVOID SLOPES OVER 65%, AVOID & STANDS, AVOID CUTTING BELOW THE W BORDER. USE PARTIAL LOG SUSPENSION.			
VCO: PP / MODIFICATION			
VAC: INT / LOW.			
Viability: MG			
ROC: PPM-1			
Recreation Site: _____			
Trail: _____			
LOGGING/TRANSPORTATION			
Landing: 35-135-2, 35-3			
Profile: 35-1-352, 35-2-351			
Field Review: DX 7-14-92			
WATERSHED/FISHERIES			
6/26/92			
Field Review: PL 7-11-92			
SOILS/GEOLOGY			
PLS & VLA 7/10/92			
Field Review: DSW 7/24/92			
WILDLIFE/SUBSISTENCE			
Field Review: VLA 7/20/92			
VISUAL/RECREATION			
Perspective Photo: _____			
Field Review: 11/11/92			
ARCHAEOLOGICAL/CULTURAL			
Field Review: N/A			

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 37
 VCU: 281
 Alternative(s): ROD
Photo Information
 Year: 1986
 Flight Line: 24
 Photo Number: 134

Legend

- VCU Boundary
- Harvest Unit Boundary
- - - Setting Boundary
- - - Adjacent Unit
- Proposed Road
- ... Contour Interval (100 feet)
- Δ ○ Landing
- ▨ Shoreline and Lakes
- ▩ Class I and II Stream Buffers
- Class III Stream
- ▲ Eagle Tree

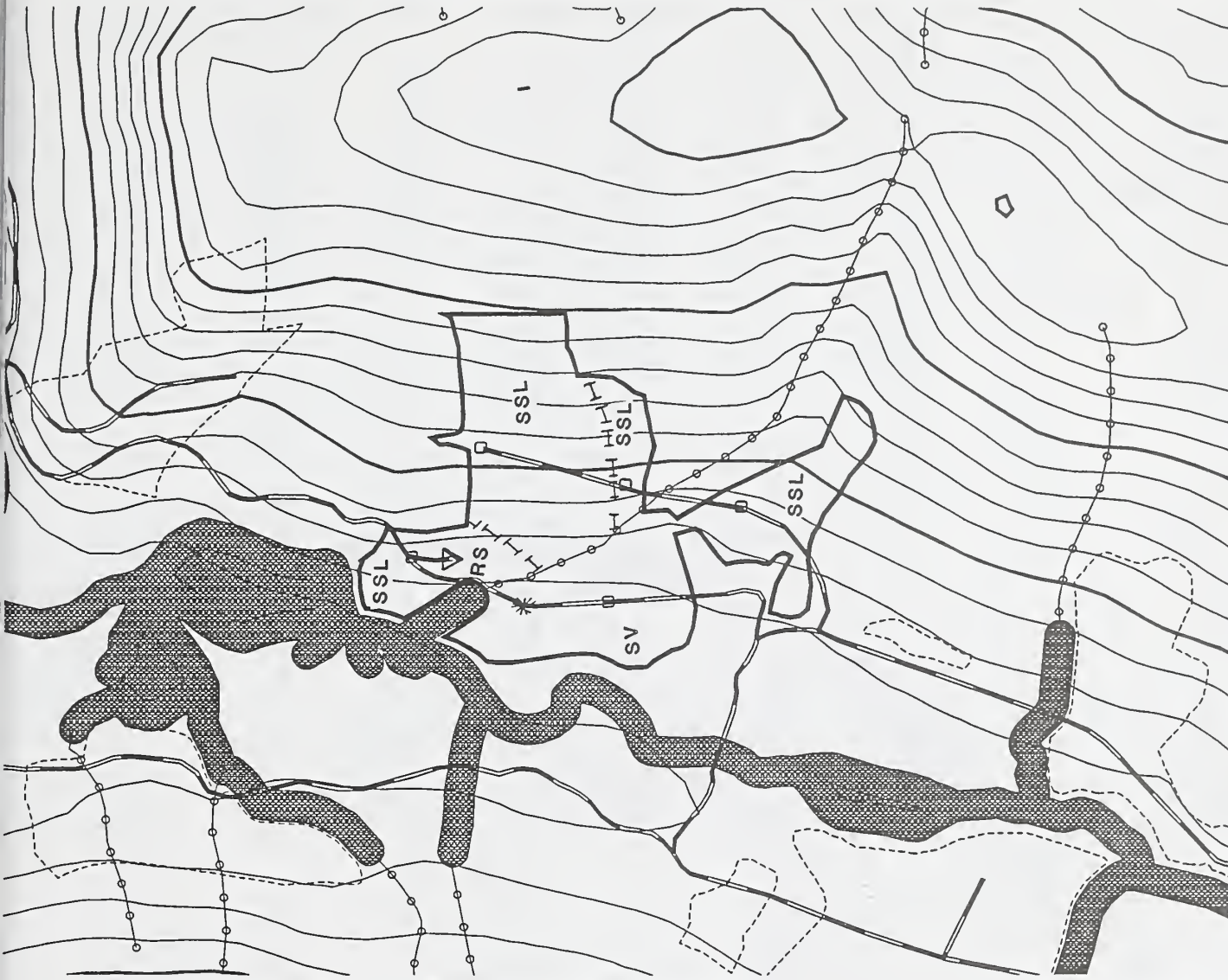
Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

IDT Review

The boundary of FEIS Unit 37 is adjusted along the Class I stream as further assurance of windfirmness.

M.T. Weber



UNIT DESIGN CARD

PROJECT: USHK		MANAGEMENT AREA:		LUD: VCU: 28) UNIT: 37	ACRES: 86
RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)					
Recommended cutting system is clear-cut. Natural regeneration of hemlock should be adequate. Planting of Sitka spruce and yellow cedar is recommended if current species composition is desired. Spruce occurs in stands in the flats by the main creek, and yellow cedar is throughout X45. A pre-commercial thin in 15-20 yrs. X45 is suggested.		flatland predominantly WH/BB/SF, a very productive site. X44 is WC/BB, considered unproductive and WH-YC/BB, moderately productive. V notches run throughout, and small meadows are within unit. Drainage bisects the plane, delineating the stand types.			
Survey retracement is being issued. NE boundary changed to conform to logical yarding boundaries. Directionally follow away from streams.		Log away from visible channels & consider fall on partial suspension. Keep 15' out of channels and remove it if it does go in. Minimize disturbance in mining and riparian wetlands. Maintain 100' buffer on class I stream forming western boundary of unit. Recreational soil buffer on class III stream if silting poses problems, burrows if needed.			
Avoid slopes over 70%. Avoid windform stands. Avoid cutting above suspension on the slopes above		& protect V-notches, slides, and curves to the valley bottom.			
Logging W half of unit will result in loss of high quality habitat for brown bear, river otter, marten. No concern for deer.		Would not meet ROS. would not be visible from USUK Bay.			
No significant to third person		No significant to third person			

Tim Type	X45	X44	TOT/AVG
Acres			
MBF/Species			
WH			
BB			
YC			
MH			
Other			
TOTAL			
MBF/AC			
Prevalent			
Plant Assoc.	120	410	
Site Index			
Regen Method			
Gross Growth			
N. Goshawk	None seen		
Wind Hazard (H.M.I.)	M		
Damage (insect, disease, animal, etc.)	CEDAR STRIPPING		

LOGGING/TRANSPORTATION	
Landing: 37-1, 2, 3, 4, 5, 6, 7, 8, 9	
Profiles:	
Field Review:	REU 6.15.92
WATERSHED/FISHERIES	
DWS/DW 7/8/92	
Field Review:	
DDW 8/13/92	
SOILS/GEOLOGY	
Field Review:	
OSW & REU 6/2/92	
WILDLIFE/SUBSISTENCE	
Field Review:	
VLA 7/20/92	
VISUAL/RECREATION	
Field Review:	
Perspective Plots:	
Field Review:	6/6 7-19-92
ARCHAEOLOGICAL/CULTURAL	
W. Z. Kocky	
Field Review:	7-19-92

Harvest Unit Design Card
Ushk Bay EIS

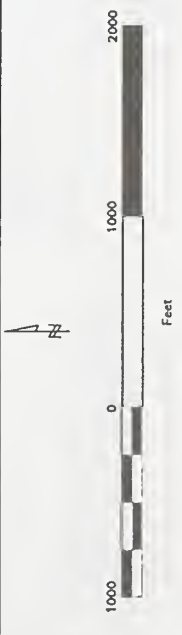
Harvest Unit: 39
VCU: 281
Alternative(s): ROD
Photo Information
Year 1986
Flight Line 25
Photo Number 112-113
Legend

- VCU Boundary
- Harvest Unit Boundary
- - - Setting Boundary
- - - Adjacent Unit
- Proposed Road
- Contour Interval (100 feet)
- Δ ○ Landing
- ▨ Shoreline and Lakes
- ▩ Class I and II Stream Buffers
- Class III Stream
- ▲ Eagle Tree

Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

IDT Review
Unit 39 as depicted in the FEIS is split into Unit 39 and Unit 39A in the Selected Alternative to reflect probable sale area boundaries.
M.J. Weber



UNIT DESIGN CARD

PROJECT: USHK		MANAGEMENT AREA:		LUD: VCU: 2.8	UNIT: 39	ACRES: 31
RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)						
RECOMMENDED CUTTING METHOD IS CLEARCUT. NATURAL REGENERATION OF HEMLOCKS SHOULD BE SUFFICIENT. PLANTING OF SITKA SPRUCE + YELLOW CEDAR IS RECOMMENDED FOR SITE PREP/REGENERATION IN ORDER TO MAINTAIN CURRENT SPECIES COMPOSITION. A PRE-COMMERCIAL THINNING IS ADVISED AT 15-20 YEARS TO ENHANCE GROWTH. IF POSSIBLE, LEAVE AT LEAST TWO SNAGS PER ACRE FOR DIVERSITY. THE PREVALENT PLANT ASSOCIATIONS ARE RANGED FROM MIXED CONIFEROUS WHICH IS LOW IN PRODUCTIVITY TO SS/BS/SC WHICH IS MODERATELY TO HIGHLY PRODUCTIVE. THE NORTH-EXTREM PORTION OF UNIT BECOMES VERY STEEP WITH SLOPES REACHING 80-90%. THIS MAY REQUIRE UPPER BOUNDARY TO BE LOWERED SLIGHTLY.						
No yarding difficulties anticipated. Unit boundary is altered where terrain slopes exceed 65%.						
100' buffer for class II stream forming western boundary of unit. Log away from V-notch channels, considering soil in partial suspension, and remove debris that enters channels.						
A PROTECT V-NOTCHES, SLIDES, AND CLINTS TO WINDFIRM STANDS. AVOID CUTTING BELOW THE TOES OF FAILURES AND CHUTES. USE PARTIAL LOG SUSPENSION ON THE SLOPES ABOVE THE VALLEY BOTTOM.						
Harvesting northern portion of unit will result in loss of high quality habitat for moose, other, brown bear, and moderate quality deer winter range.						
WOUND NOT MEET POS. MAY BE VISIBLE FROM USHK BAY						
Outside designated high-sensitivity area - no survey required						

Tim Type	X 44	X 45	TOT/AVG
Acres			
MBF/Species			
WH			
BB			
YC			
MH			
Other			
TOTAL MBF/AC			
Prevalent Plant Assoc.	410	370	
Site Index			
Regen Method			
Gross Growth	None	SEASON	
N. Goshawk			
Wind Hazard (H,M,L)			
Damage (Insect, disease, animal, etc.)			

Logging System: Running skyline	
Landings (# of Bellings): 6	
Class 1 or 2 Channels In Unit? ___	Number: ___
Class 3 Channels In Unit? ___	Number: ___
AVOID SLOPES OVER 74%. AVOID TO WINDFIRM STANDS. AVOID CUTTING BELOW THE TOES OF FAILURES AND CHUTES. USE PARTIAL LOG SUSPENSION ON THE SLOPES ABOVE THE VALLEY BOTTOM.	
VCO:	IP
VAC:	LOW
Viability:	MG
ROC:	PLANTING
Recreation Site:	
Trail:	

LOGGING/TRANSPORTATION	
Landing: 39-139-237339-4	
Profile: 39-1-350	
Field Review: D.S. 7-16-92	
WATERSHED/FISHERIES	
DDW 5/13/92	
Field Review:	
DWS/DSW 7/5/92	
SOILS/GEOLOGY	
Field Review:	
DSW & PRL 6/3/92	
WILDLIFE/SUBSISTENCE	
Field Review:	
VLA 7/21/92	
VISUAL/RECREATION	
Perspective Plots:	
Field Review: G. 7/29/92	
ARCHAEOLOGICAL/CULTURAL	
Field Review: N/A	

Harvest Unit Design Card
Ushk Bay EIS

Harvest Unit: 39A
VCU: 281
Alternative(s): ROD
Photo Information
Year 1986
Flight Line 25
Photo Number 113-113

Legend

- VCU Boundary
- Harvest Unit Boundary
- Setting Boundary
- Adjacent Unit
- Proposed Road
- Contour Interval (100 feet)
- Landing
- Shoreline and Lakes
- Class I and II Stream Buffers
- Class III Stream
- Eagle Tree

Logging System

- RS Running Skyline
- SL Slackline
- SSL Small Slackline
- H Highlead
- HE Helicopter
- SV Shovel
- GR Gravity return

IDT Review

Unit 39 as depicted in the FEIS is split into Unit 39 and Unit 39A in the Selected Alternative to reflect probable sale area boundaries.

M.J. Weber



UNIT DESIGN CARD

PROJECT:		USHK		MANAGEMENT AREA:		LUD:	VCU: 2.8	UNIT: 39A	ACRES: 47
RESOURCE (Name/Date)		RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)							
TIMBER/SILVICULTURE		RECOMMENDED CUTTING METHOD IS CLEARCUT. NATURAL REGENERATION OF HEMLOCKS SHOULD BE SUFFICIENT. PLANTING OF SITKA SPRUCE & YELLOW CEDAR IS RECOMMENDED FOR SITE PREP/REGENERATION IN ORDER TO MAINTAIN CURRENT SPECIES COMPOSITION. A PRE-COMMERCIAL THINNING IS ADVISED AT 15-20 YEARS TO ENHANCE GROWTH. IF POSSIBLE, LEAVE AT LEAST TWO SNAGS PER ACRE FOR DIVERSITY. THE PREVALENT PLANT ASSOCIATIONS ARE MIXED FROM MIXED CONIFEROUS WHICH IS LOW IN PRODUCTIVITY TO S5/S6/S7C WHICH IS MODERATELY TO HIGHLY PRODUCTIVE. THE NORTH-EASTERN PORTION OF UNIT BECOMES VERY STEEP WITH SLOPES REACHING 80-90%. THIS MAY REQUIRE SPECIAL SOIL-DRAINAGE TO BE CONSIDERED SEPARATELY.							
Stand Exam: T. ROSINA, S. ALLEN Stand Exam Type: Plots Silviculturalist Review: S Smith 7/25/92		Tm Type	X 44	X 45	TOTAL				
		Acres							
		MBF/Species							
		WH							
		BB							
		YC							
		MH							
		Other							
		TOTAL							
		MBF/Ac							
		Prevalent							
		Plant Assoc.	410	370					
		Site Index							
		Regen Method							
		Gross Growth	None	seen					
		N. Goshawk							
		Wind Hazard (H,M,L)							
		Damage (Insect, disease, animal, etc.)							
LOGGING/TRANSPORTATION		Logging System: Running skyline Landings (# of Bellings): 6							
Landing: 39-139-239-3, 39-4									
Profiles: 39-1-350									
Field Review: D. L. 7-16-92									
WATERSHED/FISHERIES		100' buffer for class II stream forming western boundary of unit. Log away from V-notch channels, considering fall in partial suspension, and remove debris that enters channels.							
DDW 8/13/92									
Field Review:									
DWB/DSW 7/5/92		Class 1 or 2 Channels? Number: 1 Class 3 Channels in Unit? Number: 1							
SOILS/GEOLOGY		AVOID SLOPES OVER 70%. AVOID TO WINDFIRM STANDS. AVOID CUTTING BELOW THE TOES OF FAULTS AND CHUTES. USE PRELIM LOG SUSPENSION ON THE SLOPES ABOVE THE VALLEY BOTTOM.							
Field Review:									
DSW & RRL 6/3/92									
WILDLIFE/SUBSISTENCE		Harvesting northern portion of unit will result in loss of high quality habitat for moose, other, brown bear, and moderate quality deer winter range.							
Field Review:									
VLA 7/21/92									
VISUAL/RECREATION		WOUND NOT MEET POS. MAY BE VISIBLE FROM USHK BAY							
Field Review:									
Perspective Photo:									
Field Review: G. L. 7-29-92									
ARCHAEOLOGICAL/CULTURAL		Outside designated high-sensitivity area - no survey required							
Field Review: N/A									

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 40

VCU: 281

Alternative(s): ROD

Photo Information

Year 1986

Flight Line 25

Photo Number 114-115

Legend

	VCU Boundary
	Harvest Unit Boundary
	Setting Boundary
	Adjacent Unit
	Proposed Road
	Contour Interval (100 feet)
	Landing
	Shoreline and Lakes
	Class I and II Stream Buffers
	Class III Stream
	Eagle Tree

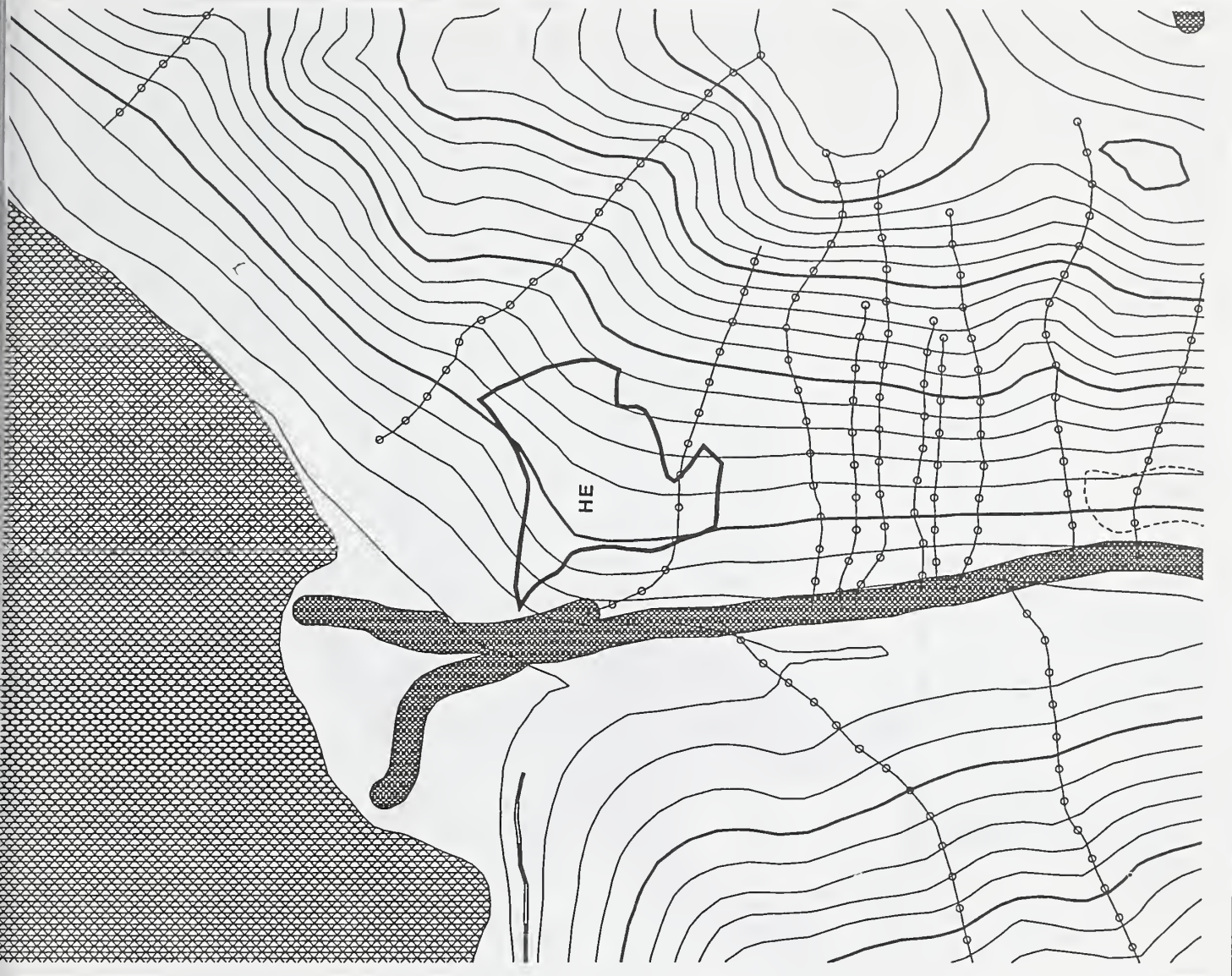
Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

IDT Review

The logging system is changed to helicopter to eliminate associated road construction called for in the FEIS.

M.J. Weber



UNIT DESIGN CARD

PROJECT: USHK MANAGEMENT AREA: LUD VCU: 2.81 UNIT: 40 ACRES: 32

RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)

RECOMMEND CLEAR-CUT SYSTEM. NATURAL REGENERATION OF HEMLOCK SHOULD BE ADEQUATE. PLANTING OF YELLOW CEDAR MAY BE NECESSARY TO MAINTAIN SPECIES COMPOSITION. WH/YC/BB

IS THE PREDOMINANT PLANT ASSOC. SITE PRODUCTIVITY IS MODERATE.

UNIT CHANGE FROM ORIGINAL DRAFT IS NOTED ON MAP.

POSSIBLE LOSS OF ACREAGE ON SOUTH END OF UNIT DUE TO STEEP DRAINAGE. CLEAR CUT WOULD CAUSE HEAVY EROSION AND DRAINAGE SITUATION IN LARGE QUANTITY INTO MAJOR STREAM BELOW.

Temporary spur w. 20% grade accesses 40-1 to yard portion above 75161 road. 1-3/4" towers suited, except for landing on southwest side in south where 1-1/2" tower proposed. Stumps at top of unit will result in fire risk. Site includes between good shelter. Rich extensive regrowth unit.

Minimize disturbance of site that's around spring discharge at NW corner of unit at spring begins Class II stream. 100' buffer recommended. Western border near class I stream, leave 100' buffer.

NW CORNERS OF THE UNIT, AVOID THE UNIT DUE TO STEEP SLOPES, SLIDE CRATES, AND FREQUENT DISSECTIONS. AVOID SLOPES OVER 45%. AVOID AND PROTECT V. NOTICES, LANDSLIDES, AND TOES OF FAULTS. USE PARTIAL LOG SUSPENSION ON THE SLOPES AROUND THE VALLEY BOTTOM

Logging SW tip of unit will result in loss of high quality habitat for marten, otter, brown bear, and moderate quality deer winter range.

WOUND NOT MEET FOS IN PRIMIPVE 1 AREA. WOUND BT. VISIBLUE FROM USHKE BAY. WOUND NOT MEET VAO.

Outside designated high-sensitivity area - no survey required

Tim Type	X44	X45	TOT/AVG
Acres	55	5	
MBF/Species			
WH			
98			
YC			
MH			
Other			
TOTAL			
MBF/AC			
Prevalent Plant Assoc.	210		
Site Index			
Repen Method			
Gross Growth			
N. Goshawk	NONE	OBSERVED	
Wind Hazard (H.M.U.)	M		
Damage (Insect, disease, animal, etc.)	COMMON STAMPING		

Logging System: Live skyline, slackline
Landings (# of Bellings): 3

Class 1 or 2 Channels in Unit? 2
Class 3 Channels in Unit? Y Number: 5

EXCEPT FOR THE EXTREME NE AND STEEP SLOPES, SLIDE CRATES, AND FREQUENT DISSECTIONS, AVOID SLOPES OVER 45%. AVOID AND PROTECT V. NOTICES, LANDSLIDES, AND TOES OF FAULTS. USE PARTIAL LOG SUSPENSION ON THE SLOPES AROUND THE VALLEY BOTTOM

VAC: PK
VAC: LOW
Viability: MH
ROC: FROM 1 / SPM
Recreation Site:
Trail:

Field Review: 7/21/92 VLA

Island Exam: 6/25/92 K SEITZ M. WHITE
Island Exam Type: VARIABLE PLOT, Fixed Plots
Bilviculturalist Review: B Smith
7/25/92

LOGGING/TRANSPORTATION
Landing: 40-1, 40-2
Profiles:
Field Review: 7/10/92

WATERSHED/FISHERIES
DWS/DW 7-5-92
Field Review: 8/5/92

SOILS/GEOLOGY
PLS & RLL 7/7 92
Field Review:
DSW 7/23 92

WILDLIFE/SUBSISTENCE
Field Review:

VISUAL/RECREATION
Field Review: 7/21/92 VLA
Perspective Plots:
Field Review: 6/14 7/21/92

ARCHAEOLOGICAL/CULTURAL
Field Review: N/A

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 72
VCU: 280
Alternative(s): ROD

Photo Information

Year 1986
Flight Line 24
Photo Number 134-135

Legend

- VCU Boundary
- Harvest Unit Boundary
- - - Setting Boundary
- - - Adjacent Unit
- == Proposed Road
- ... Contour Interval (100 feet)
- Δ ○ Landing
- ▨ Shoreline and Lakes
- ▩ Class I and II Stream Buffers
- Class III Stream
- ▲ Eagle Tree

Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

IDT Review

The western boundary of FEIS Unit 72 is pulled back from the Class I stream because of fisheries concerns. The northern boundary is pulled back to increase windfirmness of remaining trees.

M.J. Weber



UNIT DESIGN CARD

PROJECT: USHK MANAGEMENT AREA: LUD: VCU: 28 UNIT: 72 ACRES: 34

RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)

Suggested cutting method is clear-cut. Natural regeneration of hemlock should be adequate, but planting of yellow cedar and Sitka spruce is necessary to maintain current species composition (note: it may vary of unit planting not necessary). Pre-commercial thin in 15-20 years to enhance growth.

Predominant plant associations are WH/BB/SA, which is a highly productive site, and MH/BB (and variations), which is moderate to low in productivity. Deep V-notches are common in the north and east sections of unit.

UNIT BOUNDARY CHANGES: Consider dropping east boundary to avoid steep slopes, V-notches in unstable areas.

Tim Type	X44	X45	TOT/AVG
Acres			
MBF/Species			
WH			
BB			
YC			
MH			
Other			
TOTAL			
MBF/Ag			
Prevalent	120	120	
Plant Assoc.	510	510	
Site Index			
Regen Method			
Gross Growth			
N. Goshawk	none seen		
Wind Hazard (H,M,L,H)			
Damage (insect, disease, animal, etc.)			

Some logging must occur over V-notch channels. Sharp rotation is safety issue. South-center portion of unit deleted due to soil stability concerns, per geologists recommendation. Also SE portion deleted for same reason. Directionally fall toward main buffer in W. Log away from V-notch channels and consider fall on partial suspension. Keep debris out of channels and remove it if it clogs in. maintain 100' buffer on western class I stream running west edge of unit.

AVOID THE EVEN HALF OF THE UNIT. AVOID SLOPES OVER 65%. AVOID & PROTECT V-NOTCHES LANDSLIDES, AND CUTS TO WINDFIRM STANDS. AVOID CUTTING ABOVE THE HEADS AND BELOW THE TOPS OF TREES OF PARLORS, USE PARTIAL LOG SUSPENSION ABOVE THE VALLEY BOTTOM.

Logging western portion of unit will result in loss of highly habitat for offer, marten, brown bear. Logging central part of unit will impact moderate quality deer winter range.

Would not meet pos. Would not be visible.

Would not meet pos. Would not be visible.

VAC:	PR. / MBX. MOD. / MOD
VAC:	INFORM.
Visibility:	ME
ROQS	PRIMITIVE
Recreation Sites:	
Trail:	

Outside high-sensitivity zone - no survey required

Outside high-sensitivity zone - no survey required

LOGGING/TRANSPORTATION

Landing: 72-1, -2, 8, -9, -3
Profiles: 72-5, 71, 72-6, 71, 72-7

WATERSHED/FISHERIES

Field Review: 7/10/92
DWS/DW 7/8/92
Field Review: 8/3/92

SOILS/GEOLOGY

Field Review:

WILDLIFE/SUBSISTENCE

Field Review: 7/21/92

VISUAL/RECREATION

Perspective Plots:
Field Review: 6/1/92 7-28-92

ARCHAEOLOGICAL/CULTURAL

Field Review: N/A

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 74A

VCU: 281

Alternative(s): ROD

Photo Information

Year 1986

Flight Line 24

Photo Number 135-136

Legend

	VCU Boundary
	Harvest Unit Boundary
	Setting Boundary
	Adjacent Unit
	Proposed Road
	Contour Interval (100 feet)
	Landing
	Shoreline and Lakes
	Class I and II Stream Buffers
	Class III Stream
	Eagle Tree

Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

IDT Review

The boundaries of FEIS Unit 74A are adjusted as further assurance that the stream buffer between 74A and 74 will be windfirm.

M. J. Weber



UNIT DESIGN CARD

PROJECT: USHK		LUD: VCU: 2.81 UNIT: 74-4 ACRES: 2	
RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)			
RECOMMEND CLEAR-CUT SYSTEM. NATURAL REGENERATION OF HEMLOCK SHOULD BE ADEQUATE. PLANTING OF YELLOW CEDAR MAY BE NECESSARY TO MAINTAIN SPECIES COMPOSITION. A PRECOMMERCIAL THINNING AT 15 TO 20 YEARS TO ENHANCE GROWTH MAY BE NECESSARY. PREDOMINANTLY A. WH/BB/SF PLANT ASSOC. SITE IS MOST PRODUCTIVE WITHIN HEMLOCK SERIES. 1			
UNIT CHECKLINE HAS BEEN LUMPED INTO A SINGLE CONCERN, MAJORITY HAS THIS UNIT CAN BE LOST WITH CUREL SYSTEM, LUMPING HAS AVAILABLE FOR CUREL SYSTEMS. THE LUMPING WITH CUREL WILL YAKOVICH AND BE LUMPED WITH 1/2 MILE OF DISTANCE FROM UNIT SUSPENSION, SINGAPORE APEL SARGENT, HAZARD FOR THE JOURNAL CUREL SYSTEMS PARTIAL SUSPENSION IS PLANNED FOR THE JOURNAL CUREL SYSTEMS.			
Log away from V. water channels consider fall on pasture suspension. V. water is out of channels & if it does go in, remove it. Minimum distance to water - maintain 100' buffer on class II stream on western boundary and on class II stream in northeast corner of unit.			
AND PROTECT V-NOTCHES AND SLIDES TO MAINTAIN STANDS. AVOID CUTTING BELOW THE TOPS OF FAILURE. USE PARTIAL LOG SUSPENSION LOGGING ABOVE THE VALLEY BOTTOM.			
Logging western portion of site will result in loss of high quality habitat for marten, otter, and brown bear. Logging NW corner of unit will impact moderate quality deer winter range.			
(NO) NOT NEEP FOR.			
Outside designated high-sensitivity zone - no survey required			

MANAGEMENT AREA:		TmType		X4S	X44	TOTAL
Acres		MBF/Species		15	75	
WH						
BB						
YC						
MH						
Other						
TOTAL						
MBF/Ac				120		
Prevalent Plant Assoc.						
Site Index						
Regen Method						
Gross Growth						
N. Goshawk				NONE OBSERVED		
Wind Hazard (H.M.I.)						
Damage (Insect, disease, animal, etc.)						
CEDAR DECLINE						

LOGGING/TRANSPORTATION	
Landing: 4	
Profiles: 44	
Field Review: 4/8-3-92	
WATERSHED/FISHERIES	
DWS/Dsw 7/8/92	
Field Review:	
DON 8/3/92	
SOILS/GEOLOGY	
DSW & RL 5/31 92	
Field Review:	
DSW & PLS 7/12 92	
WILDLIFE/SUBSISTENCE	
Field Review:	
VLA 7/21/92	
VISUAL/RECREATION	
VAC:	MON. / MAX MOD.
VAC:	UNSEEN
Viability:	PM.
ROC:	
Recreation Sites:	
Trail:	
PERSPECTIVE PLOTS:	
Field Review: 6/1/92 7/28/92	
ARCHAEOLOGICAL	
Field Review: N/A	

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 77
VCU: 281
Alternative(s): ROD

Photo Information

Year: 1986
Flight Line: 23
Photo Number: 11-12

Legend

- VCU Boundary
- Harvest Unit Boundary
- - - Setting Boundary
- - - Adjacent Unit
- Proposed Road
- ... Contour Interval (100 feet)
- Δ ○ Landing
- ▨ Shoreline and Lakes
- ▩ Class I and II Stream Buffers
- Class III Stream
- ▲ Eagle Tree

Logging System

RS Running Skyline HE Helicopter
SL Slackline SV Shovel
SSL Small Slackline GR Gravity return
H Highlead

IDT Review

The two northern most settings of FEIS Unit 77 are dropped for hydrology and fisheries concerns and as further assurance that the stream buffer between Units 77 and 16A will remain windfirm.

M. J. Weber



PROJECT: USHK		MANAGEMENT AREA:					LUD: VCU: 281 UNIT: 77 ACRES: 77
RESOURCE (Name/Date)		RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)					
Timber/Silviculture Stand Exam: 6/4/92 K. SEITZ S. ALLEN Stand Exam Type: VARIABLE PLOT, Fixed Plots Silvicultural Review: S. Smith 7/26/92		Tim Type	x44	x45	x46	TOT/AVG	RECOMMEND CLEAR-CUT SYSTEM. NATURAL REGENERATION OF HEMLOCK SHOULD BE ADEQUATE. PLANNING OF YELLOW CEDAR MAY BE NECESSARY TO MAINTAIN SPECIES COMPOSITION. A PRECOMMERCIAL THINNING AT 15 TO 20 YEARS TO ENHANCE GROWTH MAY BE NECESSARY. PREDOMINANTLY WH/YC/BB ANT ASSOC., WITH SEVERAL OTHER TYPES OF ASSOCIATIONS PRESENT. SITES ARE MODERATE TO HIGH PRODUCTION.
Logging/Transportation Landing: 3 Profiles: Field Review: J.B. Watershed/Fisheries DWB/DSW 7/6/92 Field Review: DDN 8/13/92		Acres MBF/Species WH BB YC MH Other TOTAL MBF/ac Plant Assoc. Site Index Regen Method Gross Growth N. Goshawk Wind Hazard (H.M.U) H Damage (Insect, disease, animal, etc.)	25	27	18	UNIT LINES WERE CHANGED TO ACCOMMODATE EFFICIENT VANDING FOR UNITS. STEEP SLOPES & LOW VALUING ARE THE WEST-BOUNDING EAST SIDE OF UNIT CAN BE SHUT OUT.	
Soils/Geology Field Review: OSW & RCL 6/2/92 WILDLIFE/SUBSISTENCE Field Review: VLA 7/20/92		AVOID THE HIGH WILDER QUARTER V-NOTCHES, LANDSLIDES, AND SLIDE BELOW THE FAILURES. AVOID CUTTING SOUTH BOUNDARY OF THE UNIT. USE	Log away from V-notch channels & prevent debris from entering channels & clear them out. Minimize disturbance in overhead logging. Riparian wetlands. Maintain 100' buffer for Class II stream forming eastern boundary and clear it forming part of northern boundary. Recommend 10' buffer on Class III stream if siltation occurs at the unit. AVOID SLOPES OVER 70%. AVOID A DISTURBANCE TO WINDFIRM STANDS. AVOID CUTTING THE TONGUES SOUTH OF THE LOW RIDGE ABOVE THE RAVINE ON THE PARTIAL LOG SUSPENSION ABOVE THE VALLEY BOTTOM. Harvesting eastern portion of unit will result in loss of high quality habitat for martens, otters, brown bear. Harvesting most of unit will impact moderate quality deer winter range.				
Visual/Recreation Perspective Photo: Field Review: 6/14 7-28-92		VAO: VAC: Viability: ROC: Recreation Site: Trell:	MODIF. INF. UNKNOWN PRIMITIVE I				
Archeological/Cultural Field Review: N/A		Outside Sensitive Area - No Survey Necessary					

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 79
 VCU: 281
 Alternative(s): ROD
 Photo Information
 Year 1986
 Flight Line 22
 Photo Number 163-164

Legend

--- --	VCU Boundary
—	Harvest Unit Boundary
- - - - -	Setting Boundary
- - - - -	Adjacent Unit
==	Proposed Road
—	Contour Interval (100 feet)
□	Landing
△	Shoreline and Lakes
○	Class I and II Stream Buffers
⊗	Class III Stream
⊕	Eagle Tree

Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

IDT Review

The eastern boundary of FEIS Unit 79 is adjusted as further assurance that the stream buffer between 79 and 79A will be windfirm.

M. J. Weber



UNIT DESIGN CAHU

PROJECT: USHK		LUD: VCU: 281 UNIT: 79 ACRES: 20																																																																									
RESOURCE (Name/Dale)		MANAGEMENT AREA:																																																																									
TIMBER/SILVICULTURE		<table border="1"> <tr> <td>Tim Type</td> <td>X44</td> <td>X45</td> <td>TOTAL</td> </tr> <tr> <td>Acres</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MBF/Border</td> <td></td> <td></td> <td></td> </tr> <tr> <td>WH</td> <td></td> <td></td> <td></td> </tr> <tr> <td>BB</td> <td></td> <td></td> <td></td> </tr> <tr> <td>YC</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MH</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other</td> <td></td> <td></td> <td></td> </tr> <tr> <td>TOTAL</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MBF/AC</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Prevalent</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Plant Assoc.</td> <td>210</td> <td>110</td> <td></td> </tr> <tr> <td>Site Index</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Regen Method</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Gross Growth</td> <td></td> <td></td> <td></td> </tr> <tr> <td>N. Goshawk</td> <td>NONE</td> <td>SEEN</td> <td></td> </tr> <tr> <td>Wind Hazard (H.M.I.)</td> <td>M</td> <td></td> <td></td> </tr> <tr> <td>Damage (Insect, disease, animal, etc.)</td> <td colspan="3">STEM DECAY (minors)</td> </tr> </table>		Tim Type	X44	X45	TOTAL	Acres				MBF/Border				WH				BB				YC				MH				Other				TOTAL				MBF/AC				Prevalent				Plant Assoc.	210	110		Site Index				Regen Method				Gross Growth				N. Goshawk	NONE	SEEN		Wind Hazard (H.M.I.)	M			Damage (Insect, disease, animal, etc.)	STEM DECAY (minors)		
Tim Type	X44	X45	TOTAL																																																																								
Acres																																																																											
MBF/Border																																																																											
WH																																																																											
BB																																																																											
YC																																																																											
MH																																																																											
Other																																																																											
TOTAL																																																																											
MBF/AC																																																																											
Prevalent																																																																											
Plant Assoc.	210	110																																																																									
Site Index																																																																											
Regen Method																																																																											
Gross Growth																																																																											
N. Goshawk	NONE	SEEN																																																																									
Wind Hazard (H.M.I.)	M																																																																										
Damage (Insect, disease, animal, etc.)	STEM DECAY (minors)																																																																										
Stand Exam: M. White, J. Pusina 6/10/92 Stand Exam Type: Plots Silviculturalist Review: S Smith 7/28/92																																																																											
LOGGING/TRANSPORTATION																																																																											
Landing: 79-0-213 Profiles: 79-0-45 Field Review: Watershed/Fisheries 2/20/92 7-6-92 Field Review: 000 2/24/92																																																																											
SOILS/GEOLOGY																																																																											
Field Review: OSW & RRL 6/1/92 WILDLIFE/SUBSISTENCE Field Review: VLA 7/23/92		AVOID SLOPES OVER 70%. AVOID WINDFIRM STANDS. AVOID CUTTING BELOW THE TOES OF LANDSLIDES & CHUTES. USE PARTIAL WGS SUSPENSION VARIOUS ABOVE THE VALLEY BOTTOM.																																																																									
VISUAL/RECREATION																																																																											
Perspective Plots: Field Review: 6/18 7-29 92		VAO: Mon. VAC: INTER. VAB: UNSEEN VAC: PRIMITIVE I Recreation Sites: Trail:																																																																									
ARCHAEOLOGICAL/CULTURAL																																																																											
Field Review: W. J. O'Connell 7-18-92		No significant to avoid it avoid it																																																																									

RECOMMENDED CUTTING METHOD IS CLEARCUT. NATURAL REGENERATION OF HEMLOCK SHOULD BE SUFFICIENT. ADVISE PLANTING OF SITKA SPRUCE AND YELLOW CEDAR FOR SITE REGENERATION IF CURRENT SPECIES COMPOSITION IS TO BE MAINTAINED. A PRE-COMMERCIAL THINNING AT 15-20 YEARS WILL ENHANCE GROWTH. IF POSSIBLE, LEAVE AT LEAST TWO SNAGS PER ACRE FOR DIVERSITY. THE PREVALENT PINE ASSOCIATION IS WH/BB WHICH IS MODERATELY PRODUCTIVE. THERE IS ALSO A STRONG SS/DC COMPONENT WHICH IS HIGHLY PRODUCTIVE. PORTIONS OF THE UNIT ARE QUITE BOGGY. SLIDES AND SHALLOW SOILS ARE PRESENT IN THE UNIT. MAINTAIN 100' CREEK BUFFER.

a running stream riparian will be used with partial log suspension above valley bottom. Split guarding of V-notches where practical. No logging problems anticipated.

Long cutting from V-notch damages and consider full suspension on slopes. Protect debris from entering drainage and if it does, remove it. Minimize disturbance to muskrats. Runways from streams should be 100 feet and wind firm. Maintain 100' buffer on class I streams. ~~in such circumstances by forest~~ ~~be a concern~~ BUT ONLY IF WINDFIRM IS

AVOID SLOPES OVER 70%. AVOID WINDFIRM STANDS. AVOID CUTTING BELOW THE TOES OF LANDSLIDES & CHUTES. USE PARTIAL WGS SUSPENSION VARIOUS ABOVE THE VALLEY BOTTOM.

Harvesting NE strip of unit will result in loss of high quality habitat for marten, otter, brown bear, and moderate to high quality habitat for deer winter range.

WOULD NOT MEET POS.

No significant to avoid it avoid it

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 79A

VCU: 281

Alternative(s): ROD

Photo Information

Year 1986

Flight Line 22

Photo Number 163-164

Legend

- VCU Boundary
- Harvest Unit Boundary
- Setting Boundary
- Adjacent Unit
- Proposed Road
- Contour Interval (100 feet)
- Landing
- Shoreline and Lakes
- Class I and II Stream Buffers
- Class III Stream
- Eagle Tree

Logging System

- RS Running Skyline
- SL Slackline
- SSL Small Slackline
- H Highlead
- HE Helicopter
- SV Shovel
- GR Gravity return

IDT Review

The western boundary of FEIS Unit 79A is adjusted as further assurance that the stream buffer between 79 and 79A will be windfirm.

M.J. Weber



UNIT DESIGN CARD

PROJECT: USHK		MANAGEMENT AREA:		LUD: VCU: 281 UNIT: 79-A ACRES: 15
RESOURCE (Name/Date)		RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)		
TIMBER/SILVICULTURE		Tim Type	X44	X45
		Acres		
		MBF/Species		
		WH		
		BB		
		YC		
		MH		
		Other		
		TOTAL		
		MBF/Ac		
		Prevalent	210	110
		Plant Assoc.		
		Site Index		
		Regen Method		
		Gross Growth		
		N. Goshawk	DONE	SEEN
		Wind Hazard (H,M,L)	M	
		Damage (Insect, disease, animal, etc)	STEM DECAY (minor)	
Bland Exam: M. White, T. Pusina 6/10/92				
Bland Exam Type: Plots				
Bilviculturalist Review: S J Smith 7/28/92				
LOGGING/TRANSPORTATION		<p>a running skyline system will be used with partial log suspension above various benches. Split yarding of V-notchers where practical. No logging problems anticipated.</p>		
Landing: 79-1, 2, 3 Profiles: 79-0-45				
Field Review: WATERSHED/FISHERIES P & D/10/92 7-6-92		<p>Long away from V-notch drains and consider that suspension was lost after leaving from entering drains and if it does, remove it. Minimize disturbance to muskrats. Buffers from stream should be 100 feet and wind firm. Mark 100' buffer on class I streams. There is no concern about the 100' buffer on class II streams where there is a concern about only 100' minimum at</p>		
Field Review: SOILS/GEOLOGY D SW & RLL 6/1/92		<p>AVOID SLOPES OVER 70%. AVOID & PROTECT V-NOTCHES & SLICE CHUTES TO WINDFIRM STANDS. AVOID CUTTING BELOW THE TOES OF LANDSLIDES & CHUTES. USE PARTIAL LOG SUSPENSION YARDING ABOVE THE VALLEY BOTTOM.</p>		
Field Review: WILDLIFE/SUBSISTENCE VLA 7/23/92		<p>Harvesting NE strip of unit will result in loss of high quality habitat for marten, otter, brown bear, and moderate to high quality habitat for deer winter range.</p>		
Field Review: VISUAL/RECREATION Perspective Plots: Field Review: 6/1/92 7-29-92		<p>WOULD NOT MEET POS.</p>		
Field Review: ARCHAEOLOGICAL/CULTURAL W & D/10/92 7-18-92		<p>No significant toward historic site</p>		

Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 82

VCU: 281

Alternative(s): ROD

Photo Information

Year 1986

Flight Line 23

Photo Number 16-17

Legend

	VCU Boundary
	Harvest Unit Boundary
	Setting Boundary
	Adjacent Unit
	Proposed Road
	Contour Interval (100 feet)
	Landing
	Shoreline and Lakes
	Class I and II Stream Buffers
	Class III Stream
	Eagle Tree

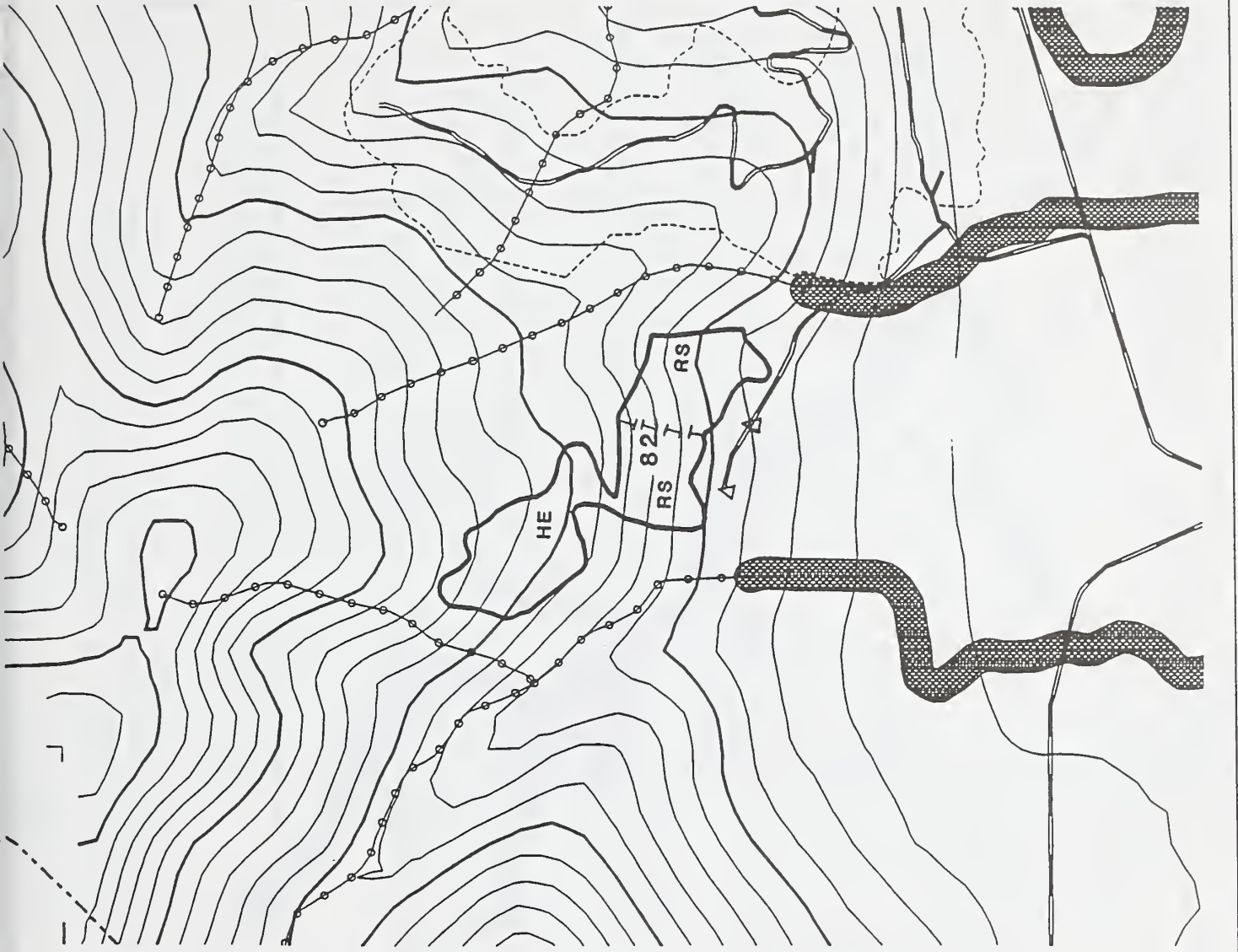
Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

IDT Review

The eastern most setting of FEIS Unit 82 is dropped as further assurance that the area between 82 and 13 will be windfirm.

M.J. Weber



UNIT DESIGN CAHD

PROJECT: USHK		MANAGEMENT AREA:		LUD: VCU: 28)	UNIT: 82	ACRES: 29
RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)						
TIMBER/SILVICULTURE		Tim Type	X44	TOTAL	RECOMMENDED WITHIN SYSTEM IS CLEAR CUT. NATURAL REGENERATION OF HEMLOCKS SHOULD BE SUFFICIENT. ADVISE PLANTING OF YELLOW CEDAR FOR REGENERATION IF CURRENT SPECIES COMPOSITION IS TO BE MAINTAINED. A PRE-COMMERCIAL THINNING AT 15-20 YEARS WILL ENHANCE GROWTH. THE PRESENT PLANT ASSOC. IS WH-YC/BS WHICH IS MODERATELY PRODUCTIVE. SEVERE CEDAR DECLINE IS PRESENT THROUGHOUT THE SOUTHERN HALF OF THE UNIT. THESE AREAS ARE VERY BOGgy AND BOGgy. THE ONLY FEASIBLE AREA TO BE CUTTED IN THE WESTERN PORTION OF THE UNIT IS NEAR THE CEDAR, BUT MAINTAIN 100' BUFFER STRIP.	
Stand Exam: M. White, T. Pusina 6/13/92 Stand Exam Type: Plots Biculturalist Review: 23 Smith 7/28/92		Acres				
		MBF/Species				
		WH				
		BS				
		YC				
		MH				
		Other				
		TOTAL				
		MBF/AC	210			
		Prevalent Plant Assoc.				
		Site Index				
		Regen Method				
		Gross Growth				
		N. Goshawk	NONE SEEN			
		Wind Hazard (H.M.U.)	M			
		Damage (Insect, disease, animal, etc.)	CEDAR DECLINE			
LOGGING/TRANSPORTATION		Helicopter ground could instead be accessed by 25% grade snubbing trucks, but this option was rejected. Snag retention is a safety issue. Full suspension not feasible.				
Landing: 82-2, 82-3, 13-5 Profiles: 2-26, 82-3-265 Field Review: 7/7/92 WATERSHED/FISHERIES PLS/RRL 7-7-92 Field Review: 7/7/92		Log away from Y-nation drainages, and if it does, remove it . Prevent debris from entering drainages and if it does, remove it. Minimize disturbance to muskrats. Consider full log suspension. No fisheries concern				
SOILS/GEOLOGY		Avoid slopes over 55% due to frequent dissections, existing failures, and possibly drained soils, avoid and protect V-notches and landslide chutes & trails to wind firm stands. Avoid cutting above the head and below the toes of the failures. Use partial log suspension yarding.				
Field Review: VLA 7/21/92		No concerns for marten, other, brown bear. SW portion of unit is moderate quality deer winter range.				
VISUAL/RECREATION		WOULD NOT MEET LOS. MAY BE PROBABLY VISIBLE.				
Perspective Plots: Field Review: 6/16 7-26-92		VAC:	PK			
		VAC:	LOW			
		Visibility:	MGT			
		ROC:	PRIMITIVE I			
		Recreation Site:				
		Trail:				
ARCHAEOLOGICAL/CULTURAL		Outside Sensitive Area - No Survey Necessary				
Field Review: N/A						

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 86

VCU: 281

Alternative(s): ROD

Photo Information

Year 1986

Flight Line 24

Photo Number 128-129

Legend

	VCU Boundary
	Harvest Unit Boundary
	Setting Boundary
	Adjacent Unit
	Proposed Road
	Contour Interval (100 feet)
	Landing
	Shoreline and Lakes
	Class I and II Stream Buffers
	Class III Stream
	Eagle Tree

Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

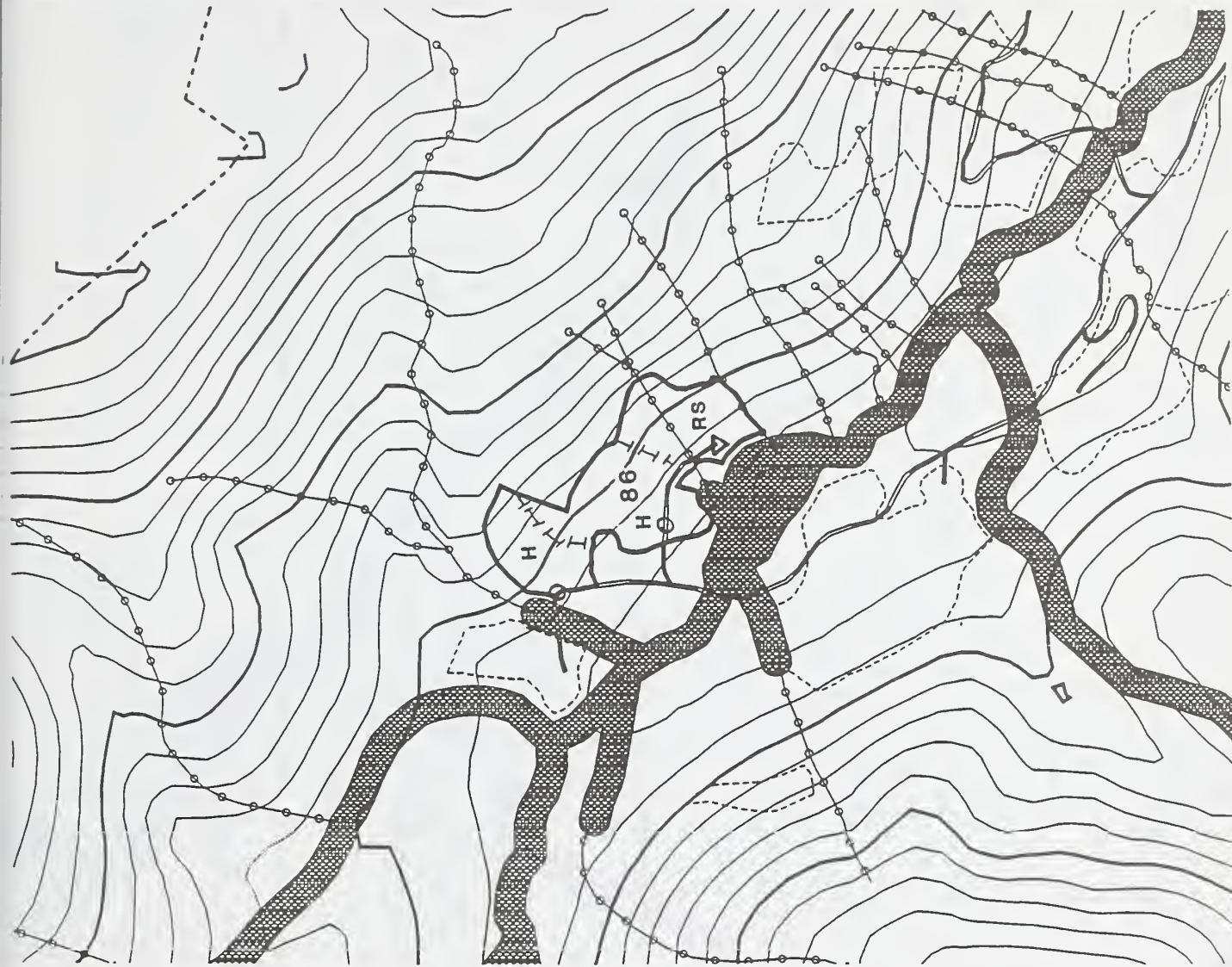
IDT Review

The 2 southern most settings of FEIS Unit 86 are dropped because of hydrology and fisheries concerns.

M.J. Weber



Feet



UNIT DESIGN CARD

PROJECT: IISHK		MANAGEMENT AREA:		LUD: VCU: 281 UNIT: 86 ACRES: 21	
RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)					
RECOMMENDED CUTTING METHOD IS CLEMENT. NATURAL REGENERATION OF HERBACE SHOULD BE SUFFICIENT. PLANTING OF YELLOW CORAL AND SITKA SPECIES FOR REGENERATION/ SITE PREP. IS ADVISED TO MAINTAIN CURRENT SPECIES COMPOSITION. A PRE-COMMERCIAL THINNING AT 15-20 YRS. IS RECOMMENDED TO ENHANCE GROWTH. LEAVE TWO SNAGS/AC FOR DIVERSITY IF POSSIBLE. LOWER PORTION OF UNIT NEEDED FOR DIVERSITY. PLANT ASSOCIATIONS ARE WH-YC/BB/SC, WH/BB (and Predominant plant associations are WH-YC/BB/SC, WH/BB (and variations thereof), and SS, which are moderate to highly productive. There are pockets of poorly drained areas (bogs/mushy) where cedar decline is prevalent. Very steep pitches (>60%), numerous minor draws, and creeks, and unstable soils (slides) were observed. A deep V-notch bisects the unit and should be avoided.		Full suspension generally not practical. Full/visual away from stream buffer. Exclude unstable portion in western portion - active slides near creek. Snag retention is safety issue.			
LOGGING/TRANSPORTATION		Log away from V-notch channels and consider full or partial suspension. Present debris from existing drains and it is due to previous thinning - limited disturbance to muskrats and riparian wetlands. Maintain 100' buffer on class 1 stream forming south boundary and on class stream tributary.			
WATERSHED/FISHERIES		BEST MANAGEMENT PRACTICES, LAND-USE, AND ANADROMOUS FISHES. REVENUE & NUTRIENT CONCENTRATIONS OF THE OLD UNIT #37 WHICH IS CONTAINED IN THIS UNIT #36, PREPARED A 100' MINIMUM BUFFER FROM THE UNIT #36. PREPARED THE UNIT #36. PREPARED THE UNIT #36.			
SOILS/GEOLOGY		Harvesting eastern portion of unit will result in loss of high quality habitat for marten, and moderate to high quality deer winter range.			
FIELD REVIEW:		WOULD NOT MEET POS. VISUALLY NOT PRACTICAL UNLESS ADJACENT UNIT CUT (S)			
WILDLIFE/SUBSISTENCE		OUTSIDE high-sensitivity zone - no cultural resources survey required			
FIELD REVIEW:		WILDLIFE/SUBSISTENCE			
VISUAL/RECREATION		VISUAL/RECREATION			
PERSPECTIVE PHOTO:		PERSPECTIVE PHOTO			
FIELD REVIEW:		FIELD REVIEW			
ARCHAEOLOGICAL/CULTURAL		ARCHAEOLOGICAL/CULTURAL			
FIELD REVIEW:		FIELD REVIEW			

Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 90

VCU: 281

Alternatives: ROD

Photo Information

Year 1986

Flight Line 23

Photo Number 16-17

Legend

- VCU Boundary
- Harvest Unit Boundary
- Setting Boundary
- Adjacent Unit
- Proposed Road
- Contour Interval (100 feet)
- Landing
- Shoreline and Lakes
- Class I and II Stream Buffers
- Class III Stream
- Eagle Tree

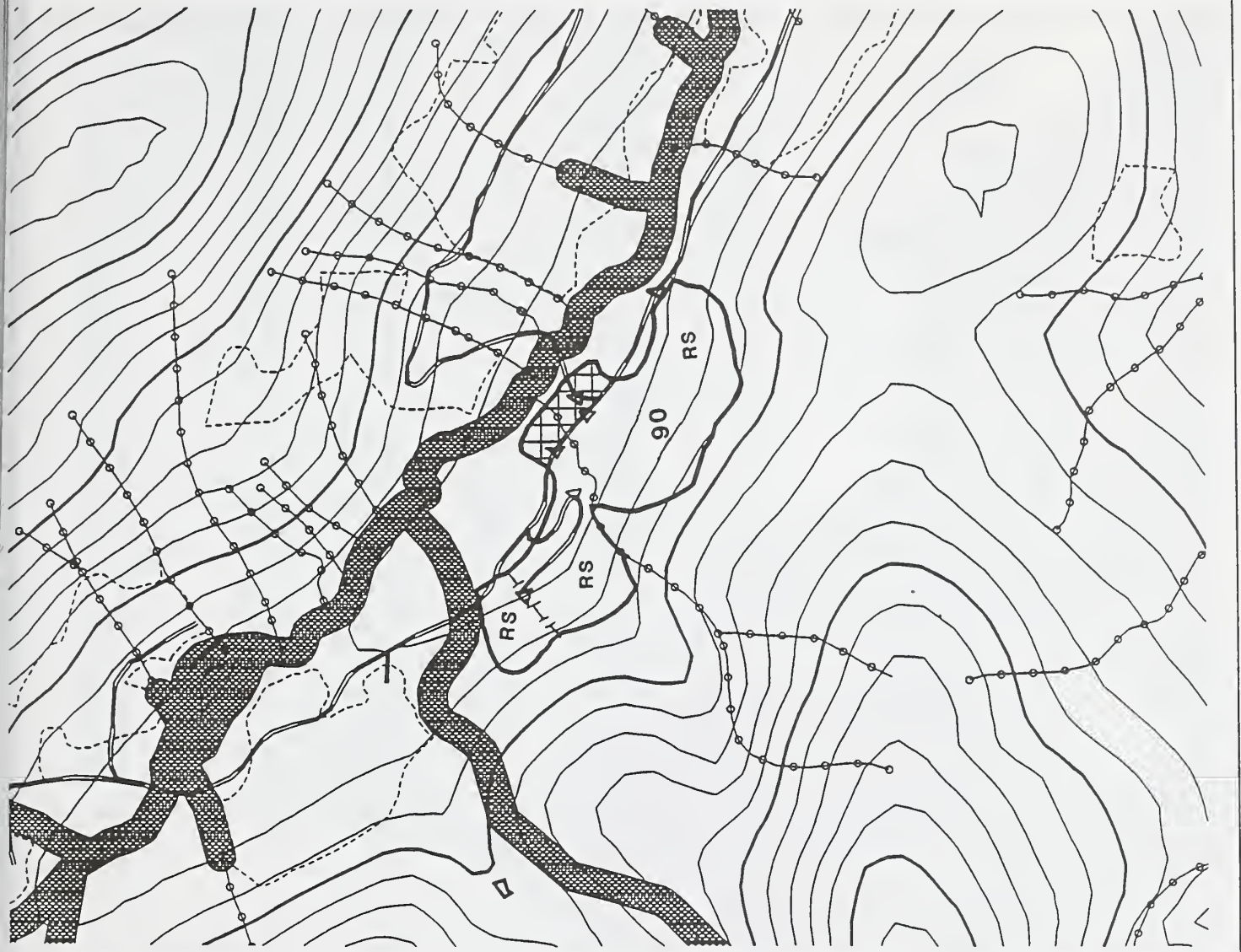
Logging System

- RS Running Skyline
- SL Slackline
- SSL Small Slackline
- H Highlead
- HE Helicopter
- SV Shovel
- GR Gravity return

IDT Review

The crosshatched area below the road will be feathered (30% of the timber removed) to increase windfirmness of the remaining trees.

M.J. Weber



UNIL DESIGN CAHU

PROJECT: USHK		MANAGEMENT AREA:		LUD:	VCU: 281	UNIT: 90	ACRES: 46(43 cut)																																				
RESOURCE (Name/Date)		RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)																																									
TIMBER/SILVICULTURE Stand Exam: M. White, K. Seitz 6/16/92 Stand Exam Type: Plots Silvicultural Review: S. Smith 7/26/92		<table border="1"> <tr> <th>Tm Type</th> <th>Acres</th> <th>MBF/Species</th> <th>WH</th> <th>BB</th> <th>YC</th> <th>MH</th> <th>Other</th> <th>TOTAL</th> <th>MBF/AC</th> <th>Prevalent</th> <th>Plant Assoc.</th> <th>Site Index</th> <th>Regen Method</th> <th>Gross Growth</th> <th>N. Goshawk</th> <th>Wind Hazard (H.M.I.)</th> <th>H</th> <th>Damage (insect, disease, animal, etc)</th> <th>SEPAR. SKIPPING</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>	Tm Type	Acres	MBF/Species	WH	BB	YC	MH	Other	TOTAL	MBF/AC	Prevalent	Plant Assoc.	Site Index	Regen Method	Gross Growth	N. Goshawk	Wind Hazard (H.M.I.)	H	Damage (insect, disease, animal, etc)	SEPAR. SKIPPING																					Recommend Clearcut System. Natural Regeneration of Hemlock should be adequate although planting of Yellow Cedar may be desired to maintain species composition. A precommercial thinning of age 15-20 may be necessary to enhance growth. Predominately a WH/YC/BB Plant association indicating a moderately productive site.
Tm Type	Acres	MBF/Species	WH	BB	YC	MH	Other	TOTAL	MBF/AC	Prevalent	Plant Assoc.	Site Index	Regen Method	Gross Growth	N. Goshawk	Wind Hazard (H.M.I.)	H	Damage (insect, disease, animal, etc)	SEPAR. SKIPPING																								
LOGGING/TRANSPORTATION Landing: 30-1, 90-2, 90-3, 90-4 Profiles: 90-1-1-230 Field Review: D. N. 7-13-92			Guidelines for swing yarder will require tie backs at landing 90-1. Safety requirements dictate the landing 90-1 location outside Unit boundary and necessitates the yarding through foot of non-merchantable logs. Can yarder access road? Consider for log skidder. Fire-vent begins from edge of unit. Remove it. Manage disturbance of muskrats. Buffers from Class I and II streams should be a minimum of 100 feet and wide 100 feet.																																								
WATERSHED/FISHERIES PLS/RRL 7-8-92 Field Review: D. N. 9/2/92			Maintain 100' buffer for class I stream forming North boundary																																								
SOILS/GEOLOGY PLS/RRL 7/8/92 Field Review: D. N. 7/20/92			Avoid slopes > 65%, Avoid & protect Unnoticed 10' diameter Avoid & protect Unnoticed & 1-1/2' diameter cracks & fissures to avoid erosion. Use proper logging technique to avoid erosion.																																								
WILDLIFE/SUBSISTENCE Field Review: VLA 7/22/92			Harvesting northern strip of unit will result in loss of high quality habitat for marten. No concerns for bear, otter, or deer.																																								
VISUAL/RECREATION Perspective Plots: Field Review: D. N. 7/24/92		VAO: PK VAC: LOW Viability: MGS ROC: PLUMMER Recreation Site: Trail:	Would not meet pos. SE portion may be visible from Usht-Bay.																																								
ARCHAEOLOGICAL/CULTURAL Field Review: N/A			Outside Sensitive Area- No Survey Necessary																																								

Harvest Unit Design Card Ushk Bay EIS

Harvest Unit: 93

VCU: 281

Alternative(s): ROD

Photo Information

Year: 1986

Flight Line: 26

Photo Number: 5-6

Legend

- VCU Boundary
- Harvest Unit Boundary
- - - Setting Boundary
- - - Adjacent Unit
- Proposed Road
- Contour Interval (100 feet)
- Δ ○ Landing
- Shoreline and Lakes
- Class I and II Stream Buffers
- Class III Stream
- ▲ Eagle Tree

Logging System

- RS Running Skyline
- SL Slackline
- SSL Small Slackline
- H Highlead
- HE Helicopter
- SV Shovel
- GR Gravity return

IDT Review

The logging system is changed to helicopter to eliminate associated road construction called for in the FEIS.

M.T. Weber



MANAGEMENT AREA:

LUD: VCU: 20 UNIT: 93

ACRES: 32

PROJECT: USHK

RESOURCE (Name/Date)

RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)

Tim Type	X45	H44	H45	TOT/AG
Acres				
MBF/Species				
WH				
BB				
YC				
MH				
Other				
TOTAL				
MBF/AG				
Plant Assoc.	210	210	210	
Site Index				
Regen Method				
Gross Growth				
N. Goshawk	none	seen		
Wind Hazard (H/M/L/H)				
Damage (insect, disease, animal, etc.)				

LOGGING/TRANSPORTATION

Landing: 4
 Profiles: 0
 Field Review: 1/18-2-92

WATERSHED/FISHERIES

PLS 7-18-92
 Field Review: 6/30/92

SOILS/GEOLOGY

PSL & RPL 7/7-92
 Field Review:

OSW 7/20-92

WILDLIFE/SUBSISTENCE

Field Review:
 VLA 7/22/92

VISUAL/RECREATION

Perspective Photo:
 Field Review: 6/18 7/24-92

ARCHAEOLOGICAL/CULTURAL

Field Review: N/A

Cutting method suggested is clear-cut. Natural regeneration of hemlock should be adequate but planting of yellow cedar is necessary to maintain current species composition. Pre-commercial thin in 15-20 years to enhance growth.

Predominant plant association is WH-YC/BB, a moderately productive site. The upper (N) portion of unit contain mountain hemlock stands (average dbh = 12) which should not be cut. Steep slopes (70-90%) occur in lower portion of unit, and at Northern-most boundary.

UNIT BOUNDARY CHANGES: lower northern boundary to avoid low productivity MH stands and steep slopes. Also, may have to circumvent lower steep slopes, towards S boundary.

SOUTHERN BOUNDARY HAS BEEN REVEALED THE LAST YEAR. UPPER LINE HAS BEEN REVEALED DUE TO SLOPES. LOT IS DESIGNATED AS A SPECIAL TROPIC MOUNTAIN FOREST. SLOPES ARE STEEPLY RAMPING FOR LOGGING CHAINS. PENNINGTON AREA IS NOT LOGGING.

Log quality from various analyses and monitoring. Last year, harvested logs were upper 2/3 of the unit and full log suspension for the remaining. Die-back is from entering the ground and if it dies, remove it. Minimize impacts to watersheds. Many class in streams, East West & Southern portion of unit. Minimize V notch channel integrity. Do not yield in channel.

AVOID SLOPES > 65%. AVOID & PROTECT V-NOTCHES, LANDSLIDE, AND AVALANCHE CHUTES AND TRAILS. POSSIBLY AVOID THE SUSPECTED LANDSLIDE MATERIAL AT THE TOE OF THE SLOPE ON THE N SIDE OF THE MUSKIE BENCH. AVOID THE STEEP SLOPE ABOVE THE CHURCH TAILACE ALONG THE SW CORNER OF THE UNIT. USE PARTIAL LOG SUSPENSION YARDING.

Harvesting southern edge of unit will result in loss of high quality marten habitat and high quality deer winter range.

WOULD NOT MEET POS. VISIBILITY FROM USHIL-BAY.

QAQ: PR
 VAC: MGT
 Visibility: LOW
 ROC: REM. I / SPM
 Recreation Site:
 Trail:

Outside Sensitive Area- No Survey Necessary

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 101
 VCU: 279
 Alternative(s): ROD
Photo Information
 Year 1986
 Flight Line 26
 Photo Number 13-14

- Legend**
- VCU Boundary
 - Harvest Unit Boundary
 - - - Setting Boundary
 - - - Adjacent Unit
 - Proposed Road
 - Contour Interval (100 feet)
 - Δ ○ Landing
 - ▨ Shoreline and Lakes
 - ▩ Class I and II Stream Buffers
 - Class III Stream
 - ▲ Eagle Tree

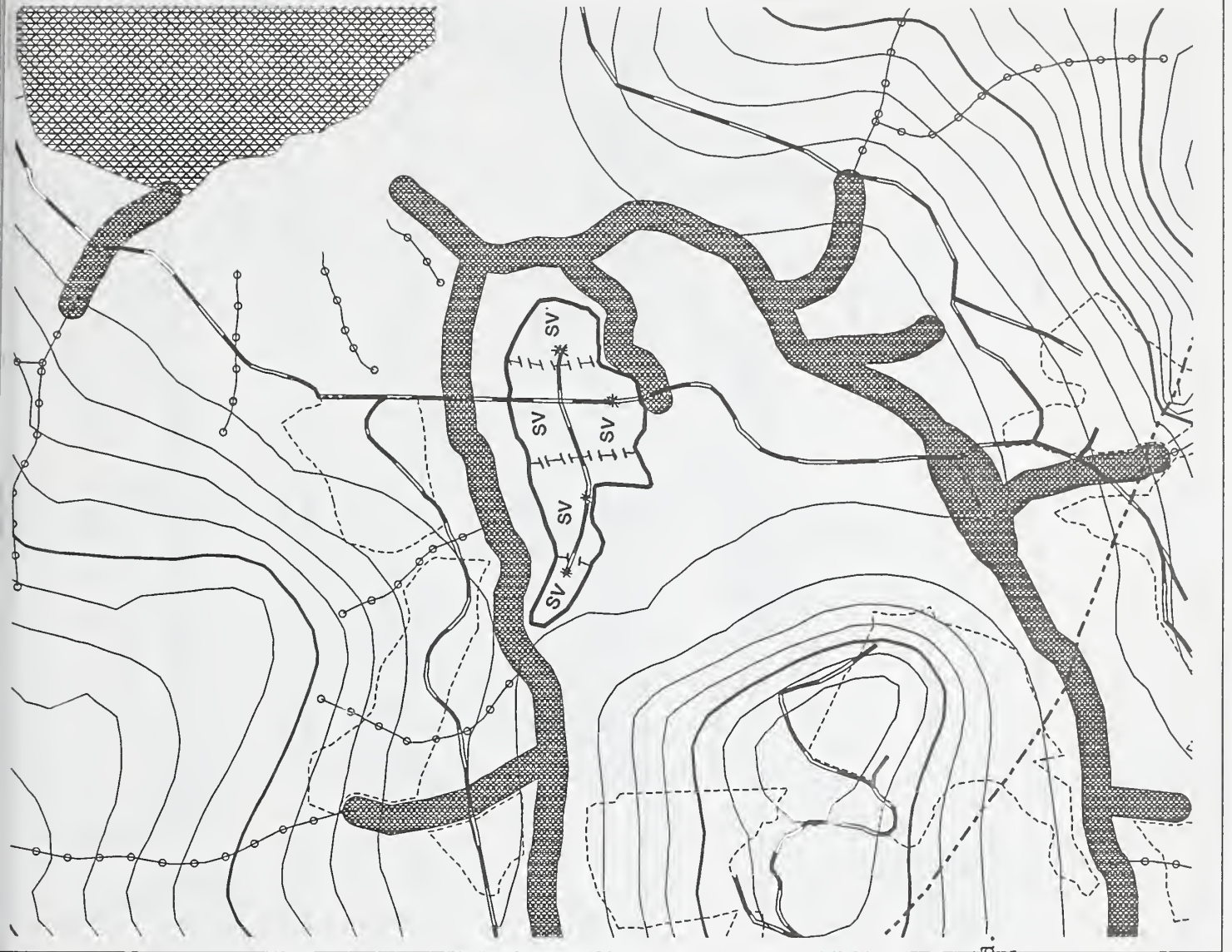
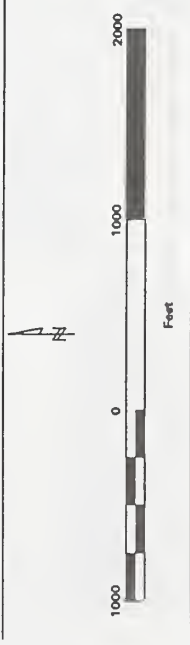
Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

IDT Review

Boundary of FEIS Unit 101 is adjusted for fisheries concerns. Spur in SW of unit is dropped.

M.J. Weber



PROJECT: USHK

MANAGEMENT AREA:

LUD: VCU: 279 UNIT: 101

ACRES: 27

RESOURCE (Name/Date)

RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)

TIMBER/SILVICULTURE

TimType	X45	TOT/AVG
Area		
MBF/Species		
WH		
BB		
YC		
MH		
Other		
TOTAL		
MBF/AG		
Prevalent		
Plant Assoc.	110	
Site Index		
Regen Method		
Gross Growth		
N. Goshawk	None Observed	
Wind Hazard (H.M.I.)	N→E	
Damage (Insect, disease, animal, etc.)		

Stand Exam: 7/9/92

M. White - M. Cox

Stand Exam Type:

Variable Plot; Fixed Plots

Silvicultural Review:

J Smith

7/28/92

Recommend clear-cut system. Natural regeneration of

hemlock should be adequate, planting of VC may be necessary to maintain species composition. A PCT at

15-20 yrs may be necessary to enhance growth.

Predominantly a WH/BB Plant Assoc. Unit productivity is moderate.

LOGGING/TRANSPORTATION

Landing: 101-1

Profiles:

Field Review: 7/8/92

WATERSHED/FISHERIES

6/26/92

Field Review:

7-17-92

SOILS/GEOLOGY

Field Review:

OSW 7/23/92

WILDLIFE/SUBSISTENCE

Field Review:

VLA 7/22/92

VISUAL/RECREATION

VQO:

VAC:

Visibility:

ROC:

Recreation Site:

Trail:

PF

LOW

MGT

SPNM

WOULD NOT LIKELY BE VISIBLE. WOULD NOT MEET FOR guidelines.

ARCHAEOLOGICAL/CULTURAL

Field Review:

7-14-92

M. K. 113

No significant cultural resources identified - some stumps along creek evidence spring board cuts (early logging)

Directionally fall yard away from stream buffers. Snag retention is safety issue.

one class 1 stream on north boundary. Also note slough area in northern corner. Recommend min. 100 ft. buffer; sufficient windfirm around slough areas. Recommend directional logging away from class 1 & slough areas. slough areas are class 1. Maintain riparian habitat integrity. prevent debris from entering drainage, and if it does, remove it.

No concerns noted.

Logging entire unit will result in loss of high quality habitat for marten, brown bear, other. No concern for deer winter range.

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 102
VCU: 279
Alternatives: ROD

Photo Information

Year: 1986
Flight Line: 26
Photo Number: 12-13

Legend

- VCU Boundary
- Harvest Unit Boundary
- Setting Boundary
- Adjacent Unit
- Proposed Road
- Contour Interval (100 feet)
- Landing
- Shoreline and Lakes
- Class I and II Stream Buffers
- Class III Stream
- Eagle Tree

Logging System

RS Running Skyline
SL Slackline
SSL Small Slackline
H Highlead
HE Helicopter
SV Shovel
GR Gravity return

IDT Review

"Finger" in SW of FEIS Unit 102 is changed to a helicopter setting to maximize yarding efficiency.

M.J. Weber



PROJECT: USHK MANAGEMENT AREA:

LUD: VCU:274/280 UNIT: 102 ACRES: 40

RESOURCE: (Name/Date) RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)

TIMBER/SILVICULTURE	Tim Type	X444	H444	TOTAL
	Acres			
	MBF/Species			
	WH			
	SB			
	YC			
	MH			
	Other			
	TOTAL			
	MBF/AC			
	Prevalent			
	Plant Assoc.	140	210	
	Site Index			
	Regen Method			
	Gross Growth			
	N. Goshawk	none seen		
	Wind Hazard (H.M.U. M)			
	Damage (Insect, disease, animal, etc.)			

Stand Exam: S. Allen/T. Pasina 7/12/92

Stand Exam Type: plots

Silvicultural Review: S. Smith 7/28/92

LOGGING/TRANSPORTATION

Landing: 02-1, 102-2

Profile: 2

Field Review: 6/29/92

WATERSHED/FISHERIES

7/4/92

Field Review: DMS 8/17/92

SOILS/GEOLOGY

Field Review: DLS & DSW 7/17/92

WILDLIFE/SUBSISTENCE

Field Review: VLA 7/22/92

VISUAL/RECREATION

Perspective Plots: VAO: PART. RETENTION / MODIFICATION

Field Review: 66/yr 7/29/92

ARCHAEOLOGICAL/CULTURAL

Field Review: N/A

Cutting system recommended is clear-cut. Hemlock regeneration should be adequate but planting of yellow cedar is suggested if current species composition is to be maintained. A pre-commercial thin at 15-20 years will enhance growth.

The pre-dominant plant associations are WH-YE/CB, a moderately productive site and WH/BB-DC, a moderate to high site quality. The eastern half of the unit has steep slopes (over 80%), exposed rocky faces and cliffs, slides, and shallow unstable soils. Steep slopes extend to creek (S boundary). Therefore, UNIT BOUNDARY CHANGES: 1/3 of the unit should not be logged (too mineral) due to steep, unstable conditions.

Unit boundaries changed as shown to logical yarding boundaries. Stumps suited to 1/4" tower. Long corner 2000' approx.

Class I on southern boundary, Class III in west dead. Maintain 100 ft by Class I stream & 50 ft buffer on Class III stream. Recommend split yarding on Class I stream keep debris out of channel (Class I in). Cut SS III buffers only if wind firm. Minimize disturbance in Class III channels & V-notch channels - remove debris that falls in, etc.

PROTECT V-NOTCHES, SLIDES, AND CHUTES TO WINDFIRM TOES OF SLIDES AND CHUTES. POSSIBLY AVOID AREAS IN THE SW ARM OF THE UNIT. USE PARNAL

Harvesting southern portion of unit will result in loss of high quality habitat for offer, brown bear. Harvesting entire unit would impact moderate quality deer winter range.

WOULD NOT MEET POS guidelines. Unknown visibility.

Outside designated high-sensitivity area - no survey required

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: 105

VCU: 279

Alternative(s): ROD

Photo Information

Year 1986

Flight Line 27

Photo Number 55

Legend

	VCU Boundary
	Harvest Unit Boundary
	Setting Boundary
	Adjacent Unit
	Proposed Road
	Contour Interval (100 feet)
	Landing
	Shoreline and Lakes
	Class I and II Stream Buffers
	Class III Stream
	Eagle Tree

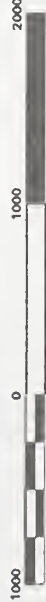
Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

IDT Review

The southern boundary of FEIS unit 105 is adjusted to address concern for visuals from the ferry route.

M. J. Weber



Feet



UNIT DESIGN CAHU

PROJECT: USHK		MANAGEMENT AREA:		LUD: VCU: 279 UNIT: 105 ACRES: //		RESOURCE CONCERNS (INCLUDING MGT, OBJECTIVES & MITIGATION)																																																																													
RESOURCE (Name/Date)		TIMBER/SILVICULTURE		LOGGING/TRANSPORTATION		SOILS/GEOLOGY																																																																													
<p>Stand Exam: 7/29/92 S. Allen + T. Pusine</p> <p>Stand Exam Type: Walk through Silvicultural Review: AS Smith 7/29/92</p>		<table border="1"> <thead> <tr> <th>Tim Type</th> <th>X44</th> <th>X45</th> <th>TOTAL</th> </tr> </thead> <tbody> <tr> <td>Acres</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MBF/Species</td> <td></td> <td></td> <td></td> </tr> <tr> <td>WH</td> <td></td> <td></td> <td></td> </tr> <tr> <td>SB</td> <td></td> <td></td> <td></td> </tr> <tr> <td>YC</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MH</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Other</td> <td></td> <td></td> <td></td> </tr> <tr> <td>TOTAL</td> <td></td> <td></td> <td></td> </tr> <tr> <td>MBF/Ac</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Prevailent</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Plant Assoc.</td> <td>110</td> <td>110</td> <td></td> </tr> <tr> <td>Site Index</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Regen Method</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Gross Growth</td> <td></td> <td></td> <td></td> </tr> <tr> <td>N. Gonhawk</td> <td>WMA</td> <td>sten</td> <td></td> </tr> <tr> <td>Wind Hazard (H, M, L, H)</td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4">Damage (Insect, disease, animal, etc.)</td> </tr> </tbody> </table>		Tim Type	X44	X45	TOTAL	Acres				MBF/Species				WH				SB				YC				MH				Other				TOTAL				MBF/Ac				Prevailent				Plant Assoc.	110	110		Site Index				Regen Method				Gross Growth				N. Gonhawk	WMA	sten		Wind Hazard (H, M, L, H)				Damage (Insect, disease, animal, etc.)				<p>Landing: 105-1, 105-2</p> <p>Profile:</p> <p>Field Review: <i>DBX 8.19.92</i></p> <p>WATERSHED/FISHERIES</p> <p>PLS 7-19-92</p> <p>Field Review: <i>Don 8/5/92</i></p>		<p>Field Review:</p> <p>OSW 7/24 92</p> <p>WILDLIFE/SUBSISTENCE</p> <p>Field Review: <i>VLA 7/22/92</i></p>		<p>Field Review:</p> <p>Visual/Recreation</p> <p>Perspective Plots:</p> <p>Field Review: <i>CL/LF 128.92</i></p>		<p>Field Review:</p> <p>ARCHAEOLOGICAL/CULTURAL</p> <p>Field Review: <i>N/A</i></p>	
Tim Type	X44	X45	TOTAL																																																																																
Acres																																																																																			
MBF/Species																																																																																			
WH																																																																																			
SB																																																																																			
YC																																																																																			
MH																																																																																			
Other																																																																																			
TOTAL																																																																																			
MBF/Ac																																																																																			
Prevailent																																																																																			
Plant Assoc.	110	110																																																																																	
Site Index																																																																																			
Regen Method																																																																																			
Gross Growth																																																																																			
N. Gonhawk	WMA	sten																																																																																	
Wind Hazard (H, M, L, H)																																																																																			
Damage (Insect, disease, animal, etc.)																																																																																			
<p>Suggested system is clear-cut. Natural regeneration of hemlock should be adequate. However planting of Sitka spruce and yellow cedar is recommended to maintain current species composition. Spruce is a good component of the stand on upper slopes, while yellow cedar is common on lower slopes. Pre-commercial thin in 15-20 yrs. Main thin 2 snags/acre if possible. Predominant plant association is WH(BP), a moderately productive site, and WH-YC(BB)SC, also moderate, is found in the NE portion. An old blowdown is evident at the ridge (narrow connection between N + S portions), resulting in dense small trees.</p> <p>Helicopter yard direct to LTF. Snag retention is safety issue.</p> <p>Long term from V-notch drainage. Consider helicopter removal. Pre-vent debris from entering drainage and if it does, remove it. Minimize disturbance to moose and riparian wetlands. Buffer on Class II and III stream should be a minimum of 100' and wind firm. No fisheries concern.</p>		<p>Avoid slopes over 65%. Avoid stands. Avoid cutting above the heads and below the tops of steep slopes, slides, and chutes. Avoid cutting the steep NE facing slope in the middle of the unit. Avoid cutting immediately adjacent to the shoulder of the slope & ravine on the NW boundary possibly avoid cutting the strip between the nose of the hill and ravine on the SW boundary. Possibly avoid the NW boundary possibly avoid cutting the strip between the nose of the hill and ravine on the SW boundary. Possibly avoid the NW boundary possibly avoid cutting the strip between the nose of the hill and ravine on the SW boundary.</p> <p>PR/MAX MODIF. Low FPA PR/OPM</p> <p>VAC: Viability: ROC: Recreation Site: Trail:</p> <p>Cutting below the ridge on the east facing slope near the east boundary. Use partial log suspension at the least. Field review stability during layout.</p>		<p>Would not meet ROS guidelines Eastern portion may be detectable from AMT. OR SHELTER WAS CUT TO REMOVE CONTRAST TO MIDDLE GROUND VIEWS</p> <p>Outside Sensitive Area- No Survey Necessary</p>																																																																															

winter
range

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: GROUPI

VCU: 281

Alternative(s): ROD

Photo Information

Year 1986

Flight Line 27

Photo Number 52-54

Legend

	VCU Boundary
	Harvest Unit Boundary
	Setting Boundary
	Adjacent Unit
	Proposed Road
	Contour Interval (100 feet)
	Landing
	Shoreline and Lakes
	Class I and II Stream Buffers
	Class III Stream
	Eagle Tree

Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

IDT Review

The northern boundary of FEIS Group I is adjusted to exclude area in ROD Unit 105.

M. J. Weber



UNIT DESIGN CARD

PROJECT: MUSHKETA		LUD: III		VCU: 279	UNIT: GRASP I	ACRES: 64 (1/6 cur)
MANAGEMENT AREA:		RESOURCE CONCERNS (INCLUDING MGT. OBJECTIVES & MITIGATION)				
TIMBER/SILVICULTURE		Tim Type	*44	*45	TOTAL	
<p>Stand Exam: 7/29/92</p> <p>S. Allen, T. Pusina</p> <p>Stand Exam Type:</p> <p>Plots</p> <p>Stratification Review:</p> <p>S. Smith</p> <p>7/29/92</p>		Acres				
		MBF/Species				
		MH				
		SH				
		YO				
		MH				
		Other				
		TOTAL				
		MBF/kg				
		Plant Assoc.	110	110		
Site Index						
Regen Method						
Gross Growth						
N. Growth						
Wind Hazard (H, M, L)						
Damage (Insects, diseases, animals, etc.)						
LOGGING/TRANSPORTATION		HELICOPTER YARD TO LANDINGS IN UNIT 105 OR TO POISON COVE LTF EJ 7/29/92				
Landing: Profile: Field Review:		Species lowest groups so they do not touch or cross stream channels (Classes I, II, III) GSR 7/29/92				
WATERSHED/FISHERIES		No soils concerns noted. EAL 7/30/92				
Field Review:						
SOILS/GEOLOGY		Avoid repeated helicopter flights within 1/4 mile of active, bald eagle nests. Maintain heliports and helicopter flight paths at least 1/4 mile from active nests. VLA 7/30/92				
Field Review:						
WILDLIFE/SUBSISTENCE		Would not meet pos. would be visible from APT. Group selection would reduce contacts in close middle ground views				
Field Review:						
VISUAL/RECREATION		VAC:	RETENTION			
Perspective Photo:		VAC:	LOW			
Field Review:		Visualing:	MIG			
		POB	SPIN			
		Recreation Site:				
		Trail:				
ARCHAEOLOGICAL/CULTURAL		No Significant Cultural Resources Identified				
Field Review:		S. Smith 7/19/92				

Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: GROUP II

VCU: 279

Alternative(s): ROD

Photo Information

Year: 1986

Flight Line: 27

Photo Number: 56-58

Legend

	VCU Boundary
	Harvest Unit Boundary
	Setting Boundary
	Adjacent Unit
	Proposed Road
	Contour Interval (100 feet)
	Landing
	Shoreline and Lakes
	Class I and II Stream Buffers
	Class III Stream
	Eagle Tree

Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

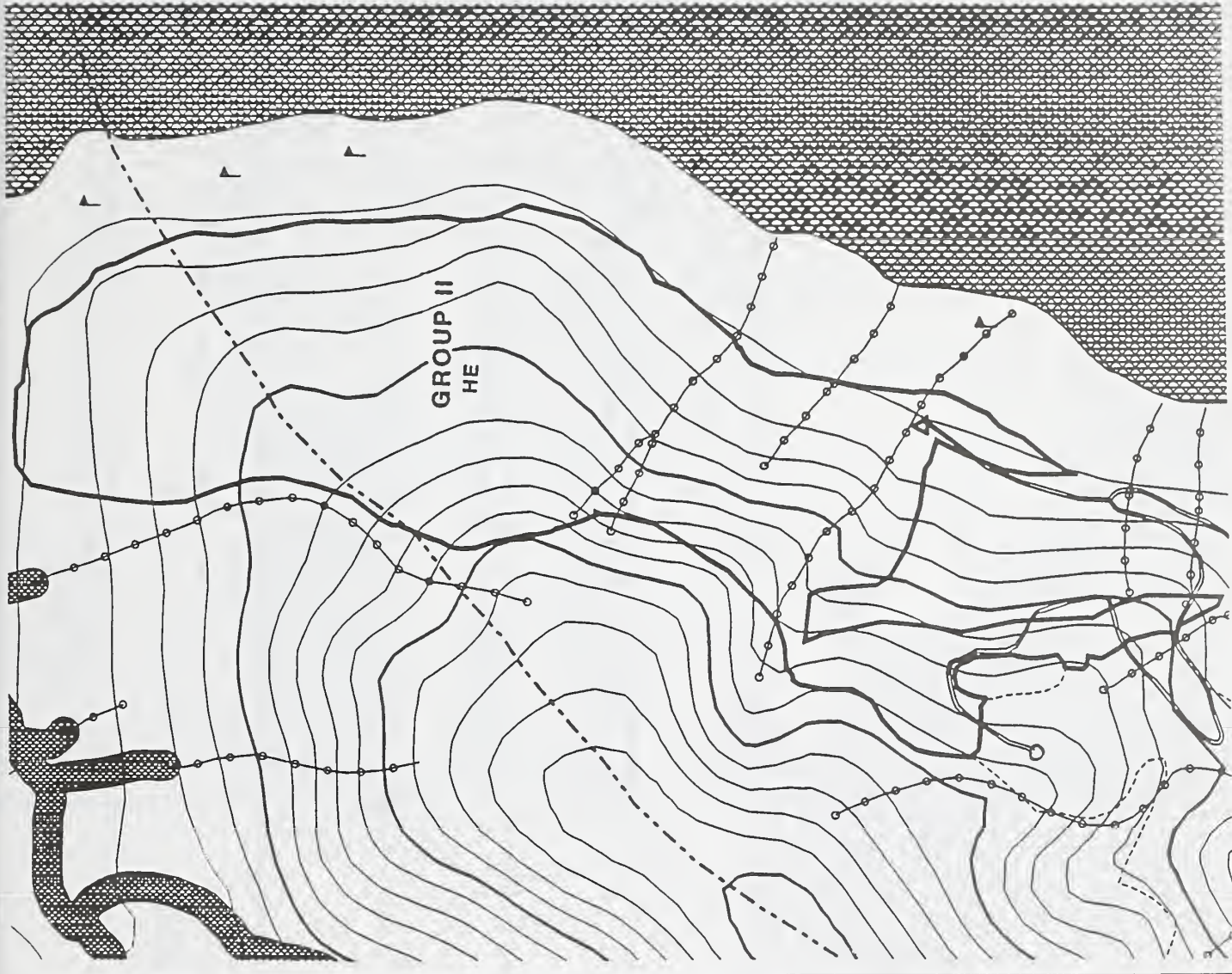
IDT Review

Harvest acres in Group II are adjusted down to 20% of unit acres as further assurance that the remaining trees will be windfirm and to address concern for visuals from the ferry route.

M.J. Weber



Feet



Harvest Unit Design Card

Ushk Bay EIS

Harvest Unit: GROUP III

VCU: 279

Alternative(s): ROD

Photo Information

Year 1986

Flight Line 27

Photo Number 61-63

Legend

	VCU Boundary
	Harvest Unit Boundary
	Setting Boundary
	Adjacent Unit
	Proposed Road
	Contour Interval (100 feet)
	Landing
	Shoreline and Lakes
	Class I and II Stream Buffers
	Class III Stream
	Eagle Tree

Logging System

RS	Running Skyline	HE	Helicopter
SL	Slackline	SV	Shovel
SSL	Small Slackline	GR	Gravity return
H	Highlead		

IDT Review

Harvest acres in Group III are adjusted down to 15% as further assurance that the remaining trees will be windfirm and to address concern for visuals from the ferry route.

M. J. Weber



Feet



UNIT DESIGN CARD

PROJECT: USHKA		LUD: IX		VCU: 281		UNIT: GROUP II		ACRES: 250(38 cont)		
RESOURCES (Name/Date)		RESOURCE CONCERNS (INCLUDING MGT OBJECTIVES & MITIGATION)								
TIMBER/SILVICULTURE		Suggested silvicultural system is group selection because of visual concerns. Groups to be approximately 2 acres in size and should occupy no more than 15 percent of total unit area. Concentrate groups at lower elevations, on ridges, depressions, or other topographic features that provide some shelter from the wind. The Unit should be helicopter logged.								
Stand Exam: 6/18/92 S. Allen, T. Pelling, M. White, K. Schitz Stand Exam Type: Plots Silvicultural Review: L Smith 7/26/92		Unit Type	X44	H44						
		Acres								
		MBF/Species								
		WH								
		BE								
		YO								
		MH								
		Other								
		TOTAL								
		MBF/Ac								
		Prescribed	120	210						
		Plant Assoc.	320							
		Site Index								
		Regen Method								
		Grown Growth								
		N. Growth								
		Wind Hazard (H.M.U.)								
		Damage (Insect, disease, animal, etc.)								
LOGGING/TRANSPORTATION		HELICOPTER YARD TO LANDINGS IN UNIT 93								
Landing: Profiles: Field Review:		S/ 7/29/92								
WATERSHED/FISHERIES		Space lowest groups so they do not touch on cross stream channels (Classes I, II, or III)								
Field Review:		CSR 7/29/92								
SOILS/GEOLOGY		Avoid and protect high mass movement hazard areas to windfirm.								
Field Review:		SLL 7/30/92								
WILDLIFE/SUBSISTENCE		Maintain 500 foot beach fringe. Portions of unit are high quality den winter range.								
Field Review:		avoid repeated helicopter flights within 1/4 mile of active bald eagle nests. VLA 7/30/92								
VISUAL/RECREATION		would not meet DOS. would be visible from AHH								
Perspective Photo:		GROUP SELECTION WOULD REDUCE CONTRAST IN MIDDLE-GROUND VIEWS								
Field Review: 6/18/92		PR LOW Mq SMA/P.								
ARCHAEOLOGICAL/CULTURAL		Outside High Sensitivity Area - No Survey Required for cultural Resources								
Field Review:		S. Smith 7/19/92								

Appendix 3

Road Management Objectives (RMOs) for the Selected Alternative



Appendix 3

Ushk Bay Road Management Objectives for the Selected Alternative

			POST-HARVEST			POST-HARVEST RESOURCE CONCERNS (SEE ROAD CARDS)								
			ACCESS NEEDS/TRAFFIC STRATEGIES											
VCU	ROAD NUMBER	ROAD MILES	ROAD STATUS	SERVICE LIFE	TRAFFIC SERVICE LEVEL	FUNCT. CLASS	HARVEST MAINT. LEVEL	4						
								FUTURE COMM VOL	SILVIC/ ADMIN	PUBLIC/ RECREATION	HYDRO/ SOILS	W/L	SUB-SIS.	FISH
279	7516 S	2.94	P	1 INTERMITTENT	D	2 C	3 1	NO	NONE	DISCOURAGE				
	75166	1.03	P	INTERMITTENT	D	C	1	NO	NONE	DISCOURAGE			X	
	751665	1.54	P	INTERMITTENT	D	C	1	NO	NONE	DISCOURAGE			X	
	7517	0.81	P	INTERMITTENT	D	L	1	NO	NONE	DISCOURAGE				
	75172	0.10	P	INTERMITTENT	D	L	1	NO	NONE	DISCOURAGE				X

280	7516 S	3.73	P	INTERMITTENT	D	C	1	NO	NONE	DISCOURAGE				
	75166	0.87	P	INTERMITTENT	D	L	1	NO	NONE	DISCOURAGE				

281	7516 N	1.85	P	INTERMITTENT	D	C	1	NO	NONE	DISCOURAGE			X	
	751601	0.50	P	INTERMITTENT	D	L	1	NO	NONE	DISCOURAGE			X	
	751603	0.15	P	INTERMITTENT	D	L	1	NO	NONE	DISCOURAGE			X	
	7518	8.25	P	INTERMITTENT	D	C	1	NO	NONE	DISCOURAGE				X
	75184	1.08	P	INTERMITTENT	D	L	1	NO	NONE	DISCOURAGE				X
	751843	0.55	P	INTERMITTENT	D	L	1	NO	NONE	DISCOURAGE				X
	75185	1.30	P	INTERMITTENT	D	L	1	NO	NONE	DISCOURAGE			X	
	75186	1.63	P	INTERMITTENT	D	L	1	NO	NONE	DISCOURAGE			X	
	7518608	0.32	P	INTERMITTENT	D	L	1	NO	NONE	DISCOURAGE				X
	7518609	0.43	P	INTERMITTENT	D	L	1	NO	NONE	DISCOURAGE				X

¹ Intermittent Service Life refers to roads developed and operated for periodic service and closed for more than one year between periods of use.

² Functional Class C refers to collector roads that are forest roads serving smaller land areas than an arterial road and usually connects forest arterial roads to forest local roads or terminal facilities. Collector roads are usually long term facilities. Functional Class L refers to local roads that are forest roads connecting terminal facilities with forest collector or forest arterial roads. Usually forest local roads are single purpose transportation facilities and can either be long or short term in nature.

³ Maintenance Level 1 infers that drainage structures may be removed, the roadbed is seeded and the road allowed to naturally close after use. Basic custodial maintenance is performed to keep damage to adjacent resources to an acceptable level.

⁴ Future commercial volume refers to volume scheduled for the foreseeable future in the Chatham Area Timber Sale Schedule. See Chapter 4, page 9, in the FEIS.

Appendix 3 R.O.D.

Note to the Selected Alternative Road Management Objectives

Road number 7516N in the selected alternative consists of road segments displayed on Road Card number 7516H and 7516G as shown in Appendix C of the FEIS. Road number 7516S in the selected alternative consists of road segments displayed on Road Card number 7516A, 7516B, 7516C and portions of 7516D and 751607 as shown in Appendix C of the FEIS. Road number 7518 in the selected alternative consists of road segments displayed on Road Card number 7518C, 7518B and a portion of 7518A as shown in Appendix C of the FEIS. These road segments are for major transportation links that are too long to display on a single road card at a reasonable scale.

Appendix 4

**Proportion of Volume
Classes 6 and 7 Planned
for Harvest in the Selected
Alternative**



Proportion of Volume Classes 6 and 7 Planned for Harvest for the Selected Alternative

The following is a summary of the analysis of the planned timber harvest for the Selected Alternative to determine compliance with the proportionality requirement of the Tongass Timber Reform Act (TTRA), Section 301(c)(2). This determination was made following the procedure contained in Forest Service Handbook 2409.18 Region 10 Supplement No. 2409.18-93-3. Tables 4-1 and 4-2 show the current land base distribution of volume classes and proportionality projections for the Selected Alternative based on the GIS TIMTYP layer per handbook direction.

Table 4-1

Selected Alternative - TTRA Proportionality for Management Area C39

	Total Timber Base (acres)	Volume Classes 4 & 5 (acres)	Volume Classes 6 & 7 (acres)	Proportionality
Current Land Base	11,243	10,949	294	2.61%
Selected Alternative Planned Harvest	-1,581	-1,539	-41	
Projected Proportionality	9,662	9,410	253	2.62%

Source: Regan, 1994

Note: This data was derived from the Chatham Area GIS, TIMTYP data layer

Proportionality = (Volume Classes 6 & 7 acres/Total Timber Base acres) x 100



Table 4-2

Selected Alternative - TTRA Proportionality for Management Area C40

	Total Timber Base (acres)	Volume Classes 4 & 5 (acres)	Volume Classes 6 & 7 (acres)	Proportionality
Current Land Base	52,331	51,867	464	0.89%
Selected Alternative Planned Harvest	-595	-590	-5	
Projected Proportionality	51,736	51,277	459	0.89%

Source: Regan, 1994

Note: This data was derived from the Chatham Area GIS, TIMTYP data layer

Proportionality = (Volume Classes 6 & 7 acres/Total Timber Base acres) x 100

The Selected Alternative is projected to result in proportionality consistent with the requirements of the TTRA for Management Areas C39 and C40.

Appendix 5

Selective Harvest Evaluation Monitoring



Monitoring

The following is a description of the effectiveness monitoring activity expected to take place in conjunction with the Ushk Bay Selected Alternative in addition to the monitoring activities described in the FEIS Appendix I.

Selective Harvest

Objective:	To evaluate the effectiveness of the selective harvest prescriptions for Groups I, II, and III in mitigating visual impacts along the ferry route in Peril Strait
Desired result:	The Groups will not experience management induced windthrow because of the selective harvest prescriptions and will meet a Visual Quality Objective of Partial Retention
Measurement:	Calculate the VQO following timber harvest and periodically spot-check the Groups windfirmness
Evaluation:	Determine if a Partial Retention VQO was achieved and if the residual trees within Groups are windfirm
Responsible staff:	Landscape Architect and District Timber staff
Record of results:	Results documented in a short report to Forest Supervisor
Annual cost:	\$1,000
Personnel needs:	None



The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs and marital or familial status. (Not all prohibited bases apply to all programs.) [sic] Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-5881 (voice) or (202) 720-7808 (TDD).

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C., 20250, or call (202) 720-7327 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.



* NATIONAL AGRICULTURAL LIBRARY



1022273665